Second Quarter FY 2024 Quarterly Update

Infineon Technologies AG
Investor Relations

Infineon at a glance

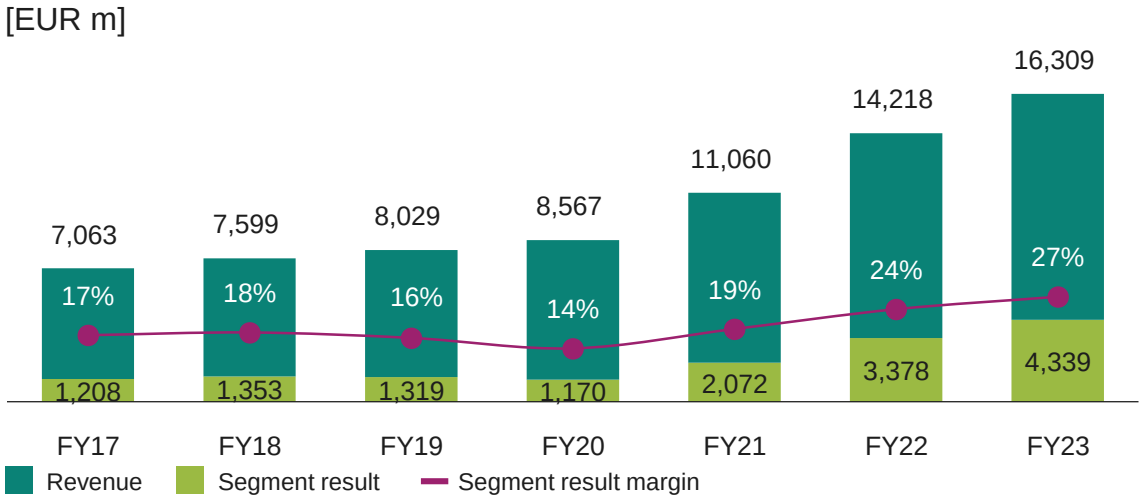
Addressing long-term high-growth trends

Energy
green and efficient

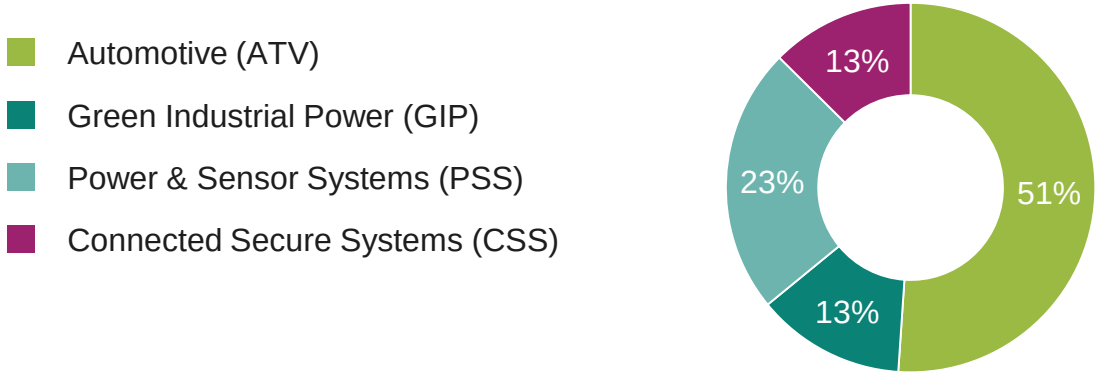
Mobility
clean and safe

IoT
smart and secure

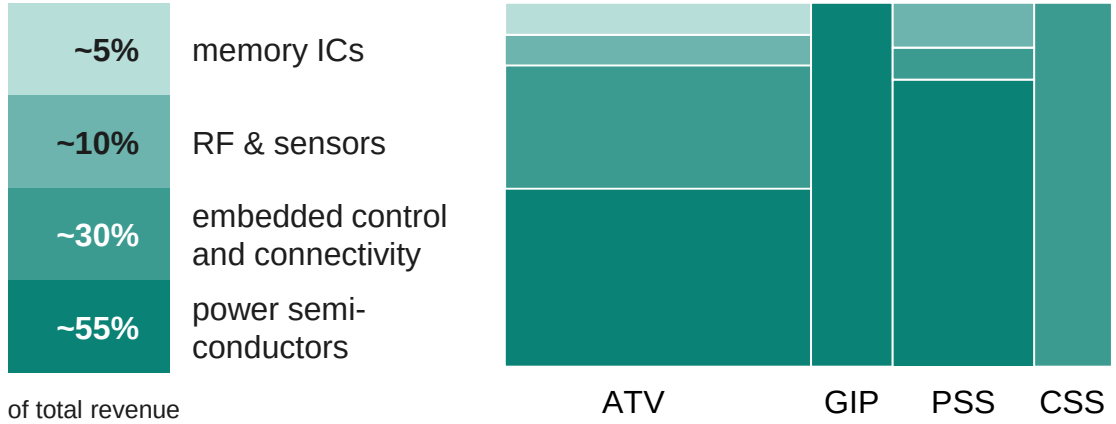
Financials



FY23 revenue by segment

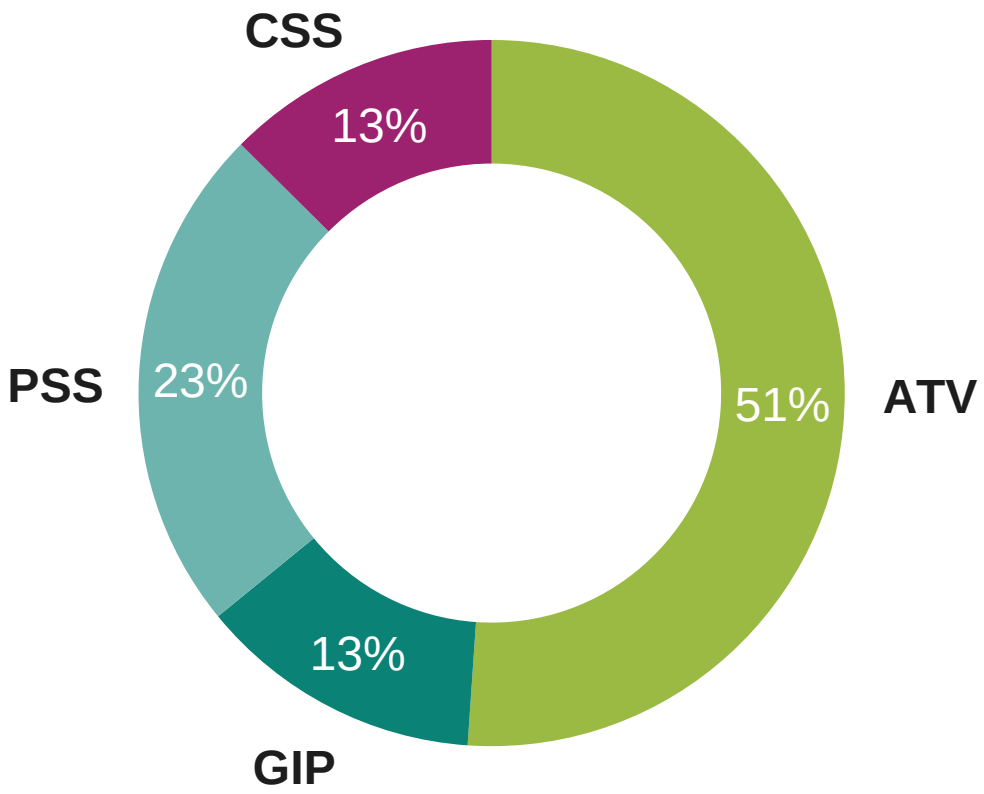


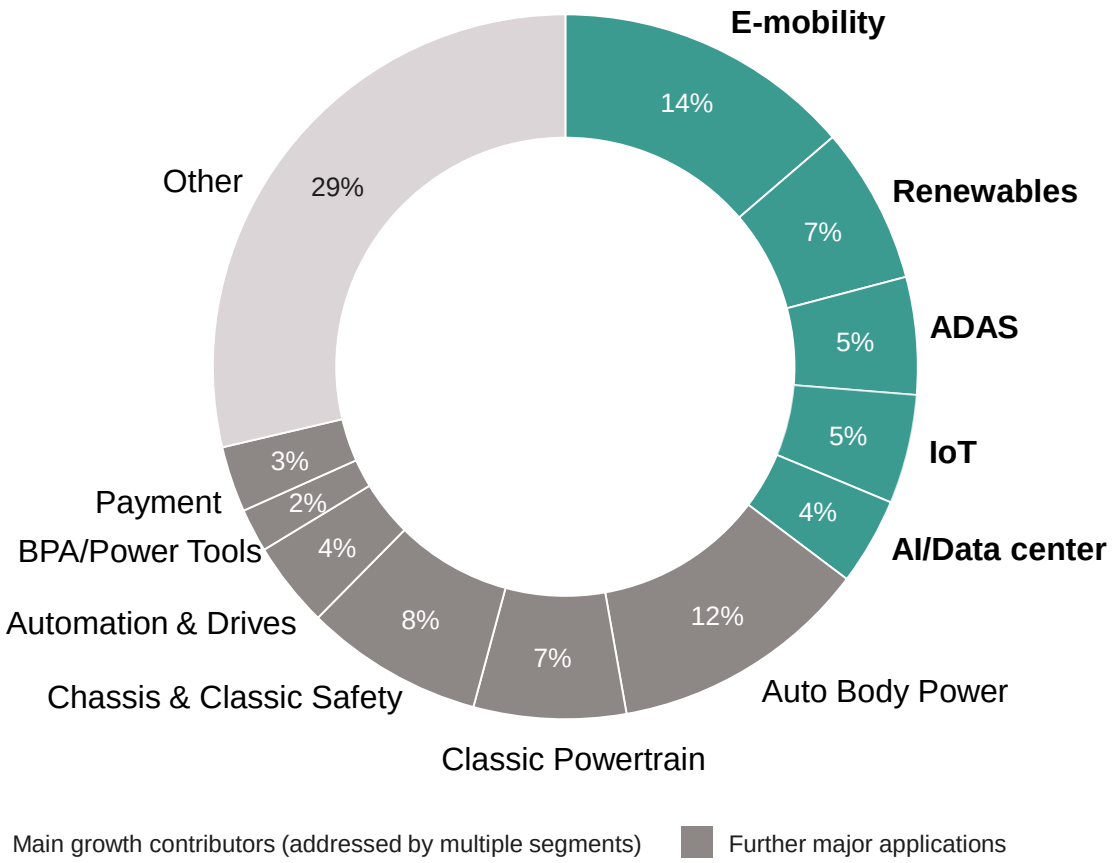
FY23 revenue by product category



Well-balanced portfolio among segments and key applications, highest growth coming from Decarbonization and Digitalization

FY23 revenue of €16,309m by segment and key application

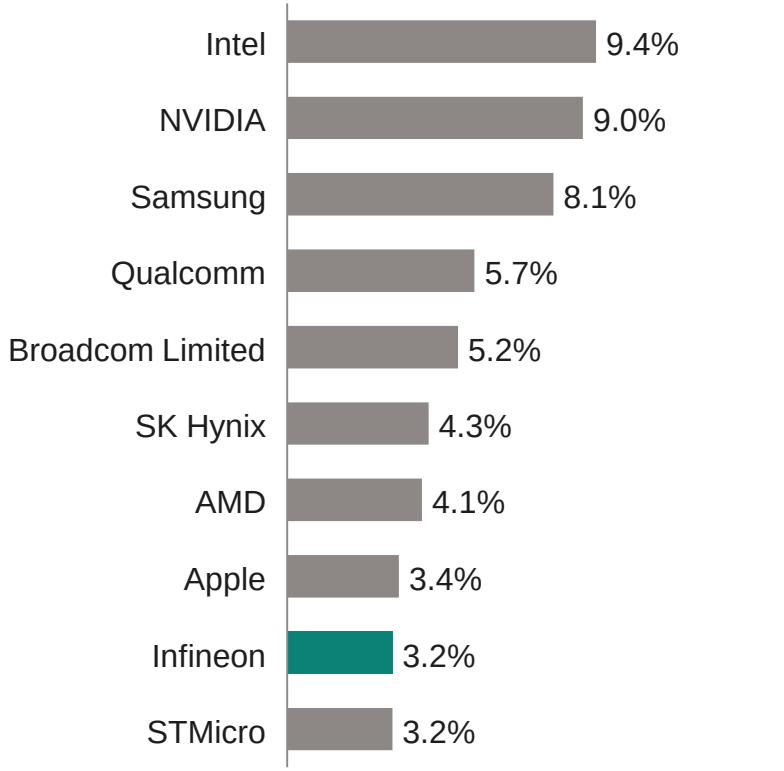




Infineon is a global player, clear #1 in power semiconductors, and ranked #2 in the overall microcontroller market

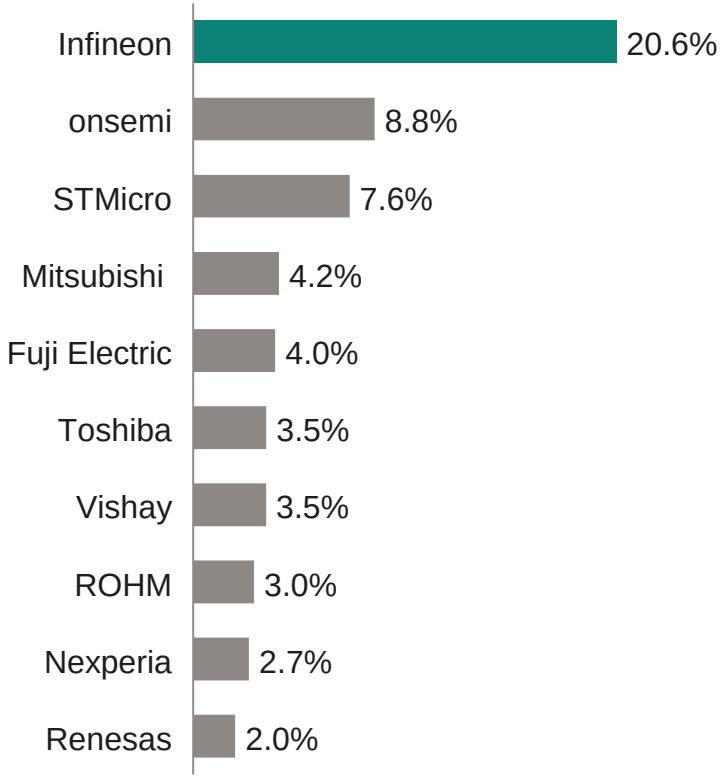
Semiconductor suppliers

2023 total global market: USD 545bn[1]



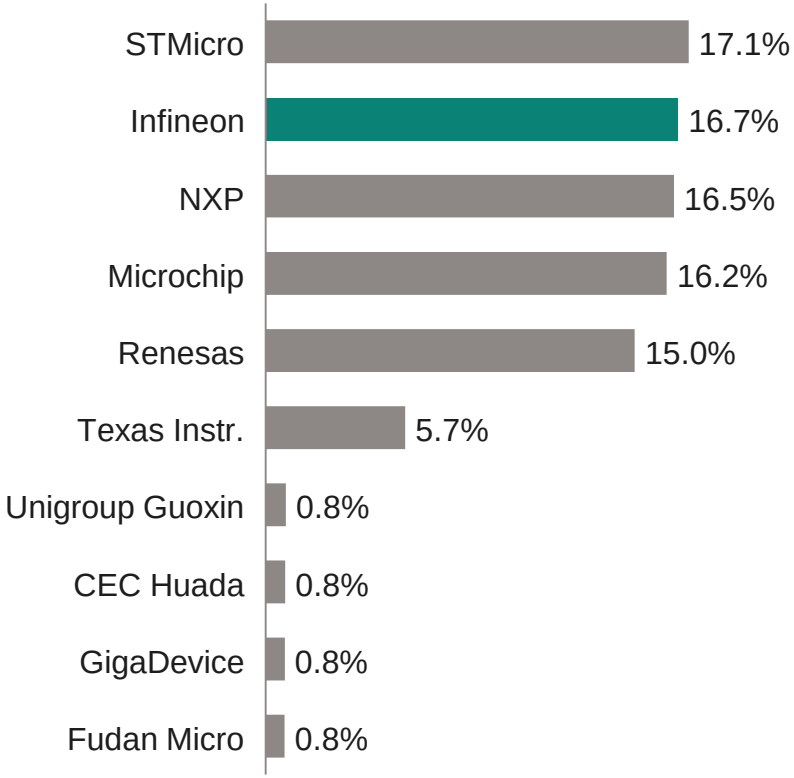
Power discretes and modules

2022 total global market: USD 30.9bn[2]



Microcontroller suppliers

2023 total global market: USD 29.8bn[3]



1 Based on or includes research from Omdia: *Annual 2001-2023 Semiconductor Market Share Competitive Landscaping Tool – 4Q23.* March 2024. | **2** Based on or includes research from Omdia: *Power Semiconductor Market Share Database – 2022.* September 2023. Results are not an endorsement of Infineon Technologies AG. Any reliance on these results is at the third party's own risk.
3 Charts/graphics created by Infineon based on Gartner research. Source: Gartner, Inc., Market Share: *Semiconductors by End Market, Worldwide, 2023.* April 2024. GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

Our Target Operating Model: committing to ambitious financial goals and being the sustainability leader

Target Operating Model
through cycle

Revenue growth	**>10%**
Segment Result Margin	**25%**
Adj. Free Cash Flow Margin[1]	**10-15%**

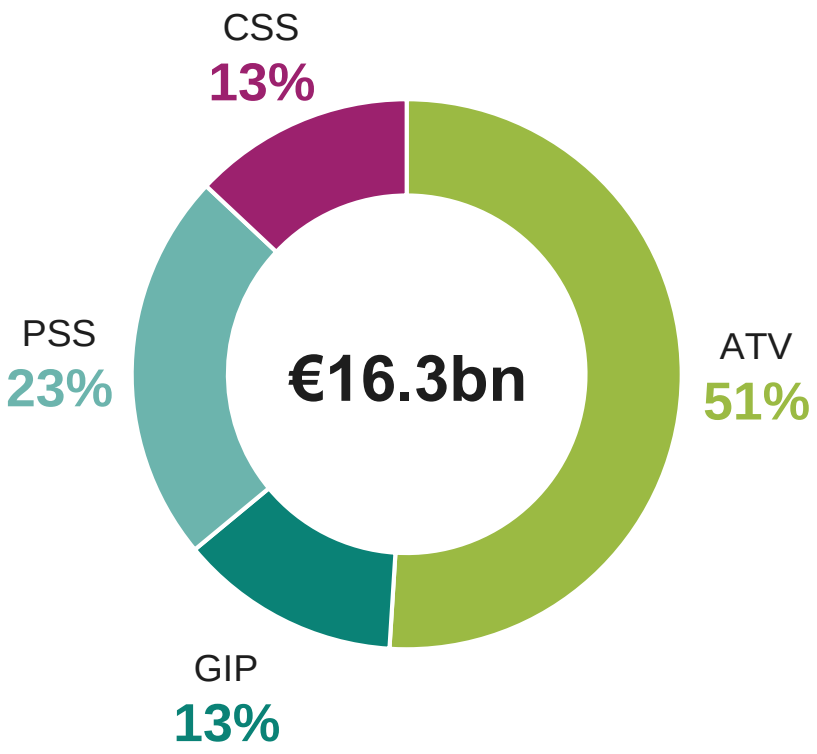
Sustainability leader
CO_2 neutrality 2030

[1] Excluding major frontend buildings

Double-digit growth ahead – five key applications account for ~60% of growth; well-diversified divisional split

FY23

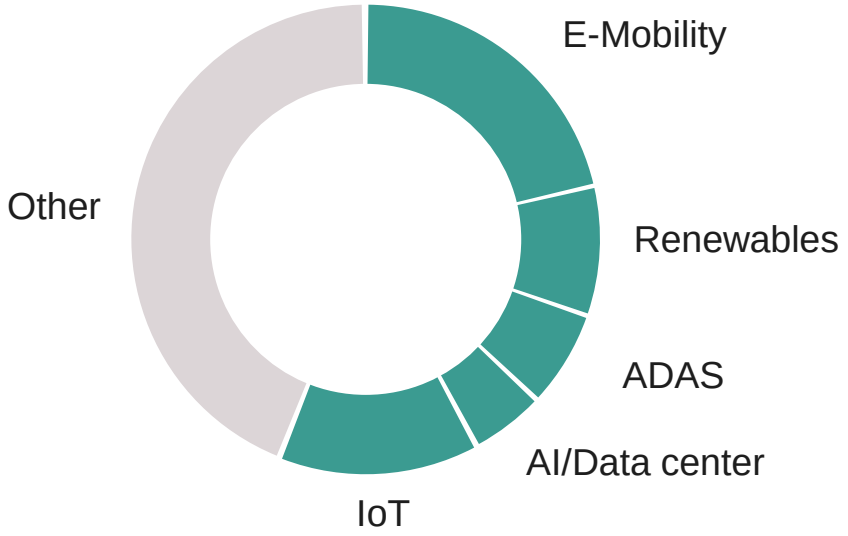
Revenue by division



>10%
CAGR

FY22-27e

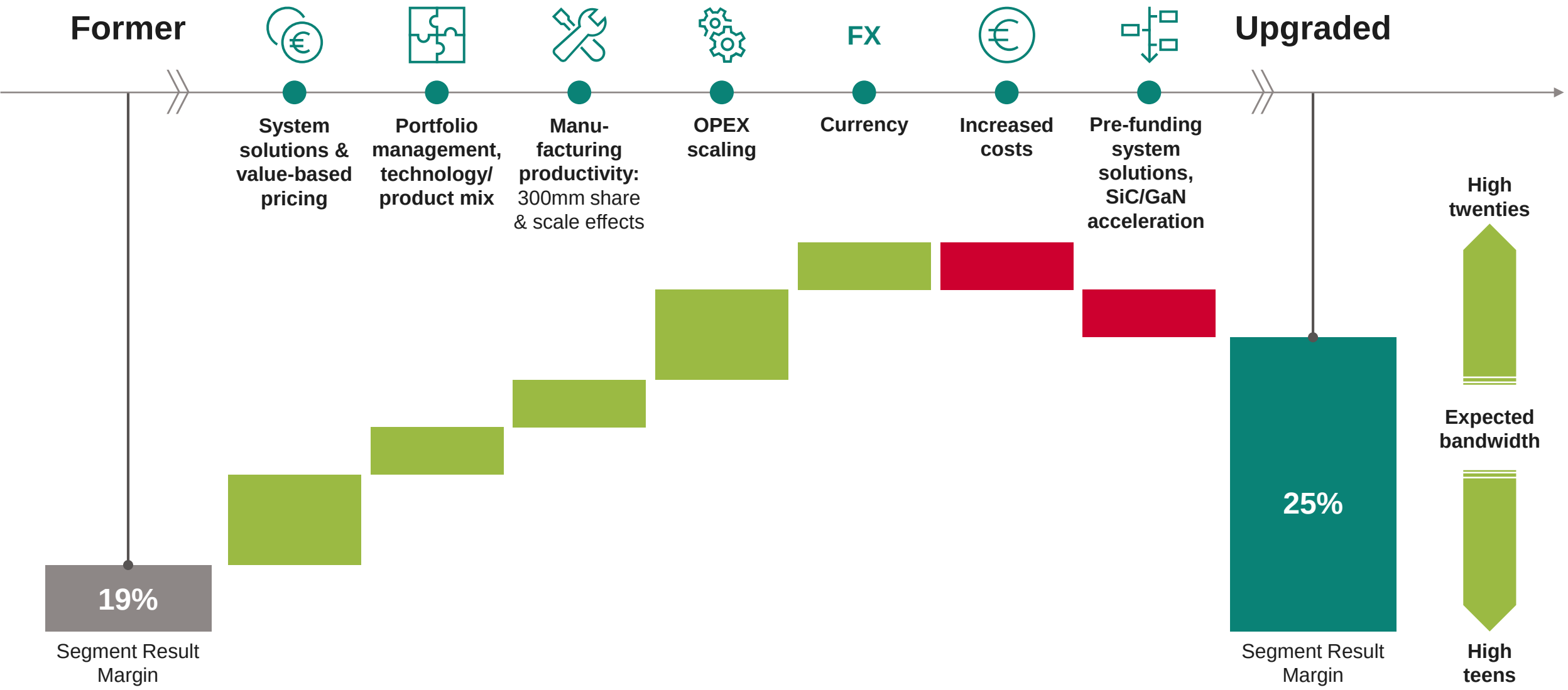
Revenue growth contribution by driver



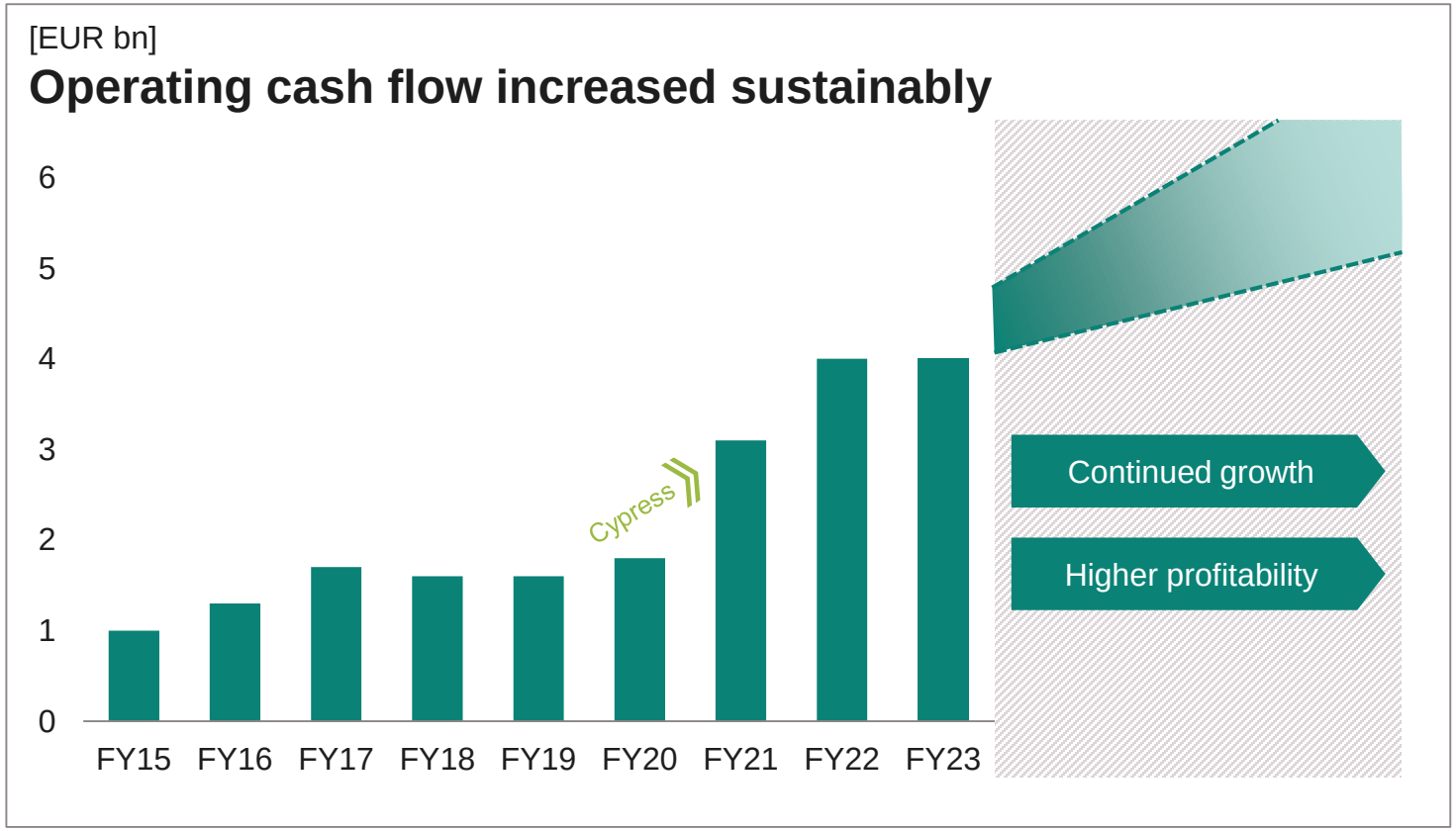
Through cycle growth rates by division

ATV	GIP	PSS	CSS
>10%	>10%	~10%	~10%

Our Target Operating Model: significant margin expansion through the cycle



Free Cash Flow generation increasing over the cycle, driven by profitable growth and better asset efficiency



- Accretive investments into high organic growth
- Operating cash flow expected to outgrow investments mid-/long-term
- Differentiated in-house manufacturing complemented by ~40% outsourcing share over time
- FY24-28: ~€4.5bn cum. investments into major frontend buildings

Adj. Free Cash Flow margin target: 10-15% of sales, excl. major frontend buildings

Outlook for Q3 FY24 and FY24

	Outlook Q3 FY24[1]	Outlook FY24[1]
Revenue	~€3.8bn	€15.1bn +/-400m
Adj. Gross Margin		low-forties
Segment Result Margin	high-teens	~20%
FCF/adj. FCF		~€0m/~€1.6bn
Investments		~€2.8bn
D&A		~€1.9bn[2]

[1] Based on an assumed average exchange rate of $1.10 for €1.00
[2] Including the amortization of around 400 million Euros from purchase price allocations

Undisputed power systems leadership mastering all three key materials

- Reliable multi sourcing of raw materials
- World-scale fabs

Controller | **Driver IC** | **Power switch** (Si/SiC/GaN)

Software + Algorithms

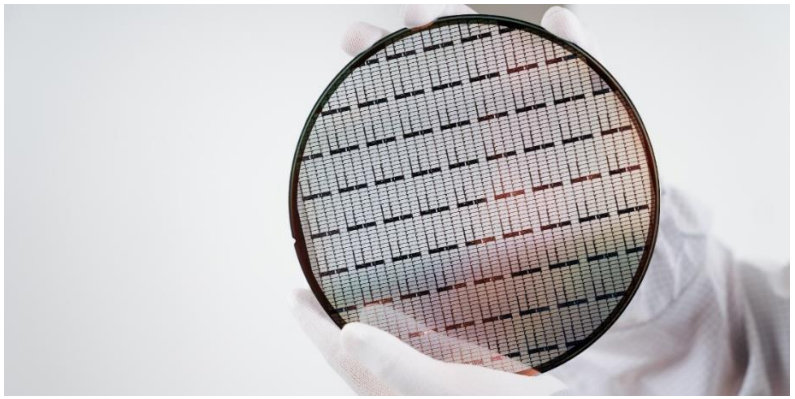
- Application understanding
- Packaging know-how and hybridization competence

Leadership in Power Systems across all materials and technologies

Silicon
Diode – MOSFET – IGBT – Driver – Controller

Silicon carbide
Diode – MOSFET

Gallium nitride
HEMT – Driver



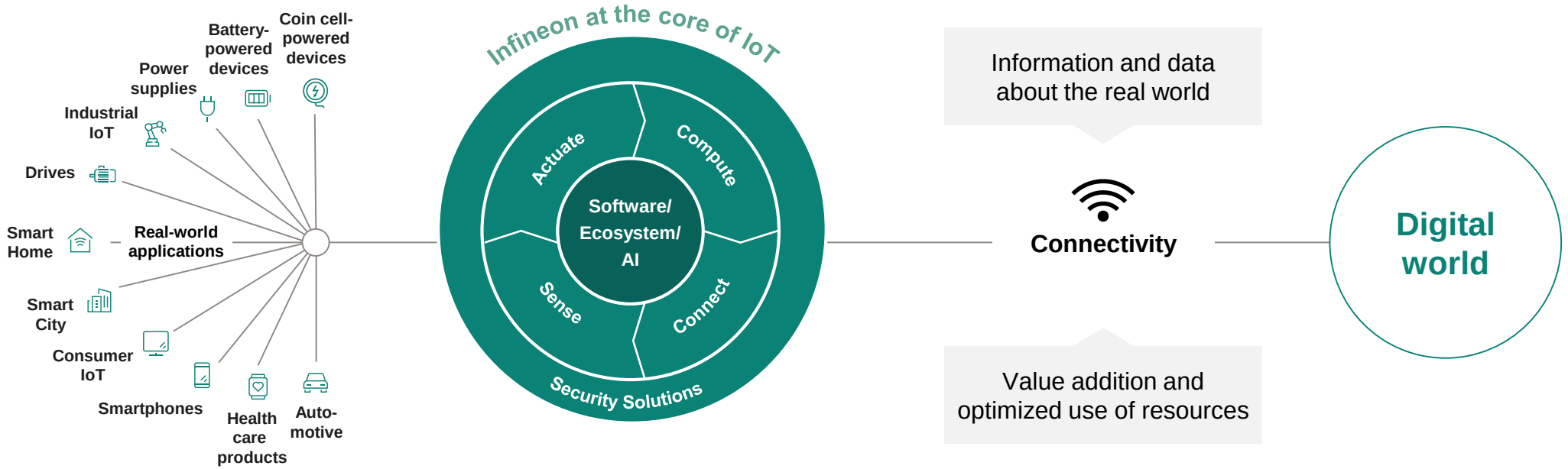
Infineon at the core of IoT – driving digitalization by serving strongly growing multi-application markets

Consumer IoT

Industrial IoT

Automotive IoT

Products: MCU – Connectivity (Wi-Fi, BLE, NFC) – Sensors – Security – Power supply & switches



ESG:
Targets and achievements

Our 2030 carbon neutrality goal is aligned with the Paris Climate Agreement's 1.5°C target

CO_2 burden[1]

3.4 million tons of CO_2 equivalents

Ratio

~1:34

CO_2 savings[2]

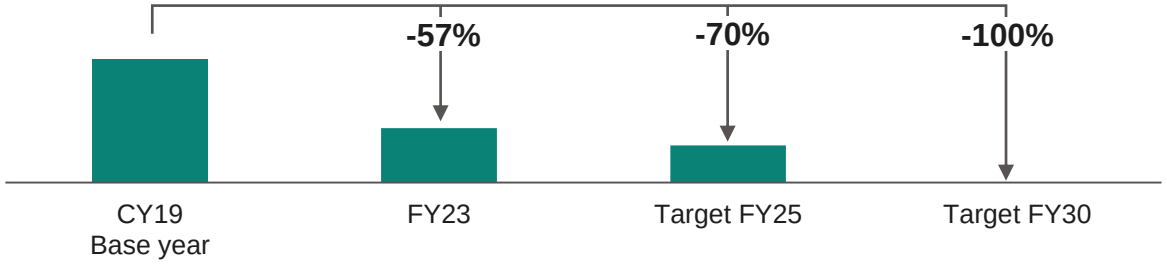
116.6 million tons of CO_2 equivalents

On the road to carbon neutrality[3] we achieved significant milestones by

- Using green electricity in Europe and North America and our main sites Kulim and Melaka in Malaysia
- Installation start of PFC abatement system in Austin

Infineon's CO_2 target[3] by 2025 and 2030

Net CO_2 emissions in million tons of CO_2 equivalents



Net ecological benefit: **CO_2 emissions reduction of more than 113 million tons**

[1, 2, 3] For further explanation see "ESG footnotes" in the appendix

External recognitions confirm our engagement in contributing to a sustainable society

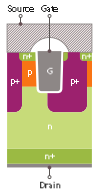
	Rating/Score	Scale	Date
MSCI ESG	AA	CCC to AAA	05/2023
CDP	B climate scoring B water scoring	F to A	02/2024
Ecovadis	99th percentile “Platinum” award	0 to 100	03/2023
Dow Jones Sustainability™ Index	77 Dow Jones Sustainability™ World Index listing	0 to 100	12/2023
ISS ESG Corporate Rating	Prime Status	D- to A+	03/2023
FTSE4Good Index	Index member	–	06/2023
Sustainalytics	ESG industry top performer	–	01/2024

Infineon’s wide bandgap strategy

With a world-scale fab complementing existing strengths, Infineon will be the industry's most competitive provider of SiC technology

SiC raw material supply + Cold Split technology

- More than 6 qualified SiC wafer and boule suppliers
- Increased productivity through Cold Split



Superior trench technology

- 30% more chips per wafer than planar
- Unmatched reliability with zero field returns

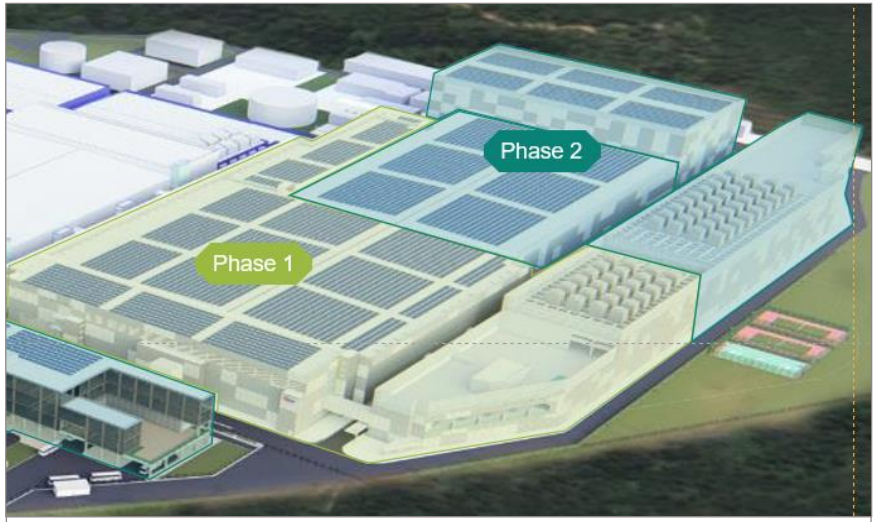
Packaging portfolio

- Best-in-class in-house packaging solutions
- New .XT technology for highest power density

P2S

Deep system understanding

- Decades of experience
- Broadest portfolio: off-the-shelf plus customized solutions



World-scale 200-millimeter fab with industry-leading cost position

Smart phase-over and ramp-up of 200mm volume production to enable next level of innovation for customer value with SiC

Villach **Kulim**

Pilot projects on track

- Qualification on selected high-volume technologies nearly finished
- SiC multi-sourcing strategy for raw materials in place
- Wafer yield equal or better to 150mm

Smart 200mm phase-over

- Volume production in Villach and Kulim
- Cleanroom and tools already available
- Full transition to 200mm within 3 years after qualification planned

Timeline

- Product roll-out based on 200mm starting Q1/2025
- Major new chip developments on 200mm

Expansion of Kulim 3 backed by strong long-term customer commitments

Automotive

CHERY

SAIC

Ford

A total of **6** OEMs

Industrial (incl. PV and ESS)

solaredge

A total of **5** major customers

Design-wins: ~ €5bn

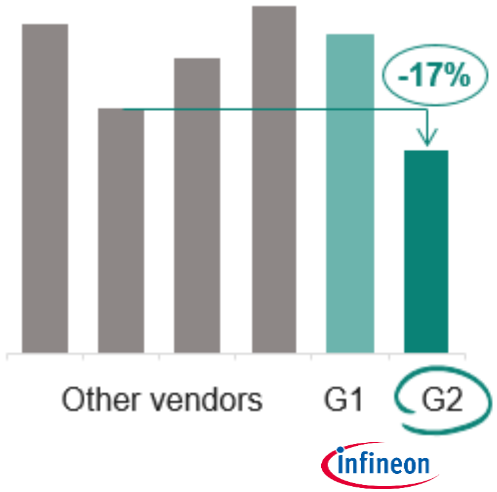
Related customer pre-payments: ~ €1bn

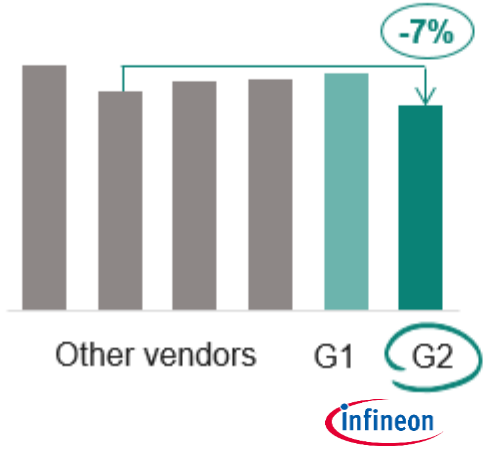
- Phase 2 of Kulim module 3 expansion is backed by numerous customer commitments
- Significant design-wins in automotive and renewable applications
- About €1bn of customer pre-payments contribute to our free cash flow in FY24 and FY25

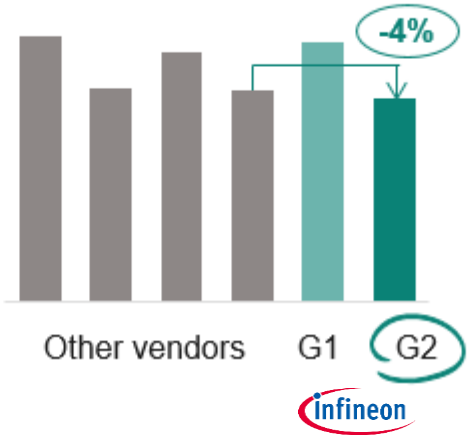
Unveiling a new performance budget with CoolSiC™ G2

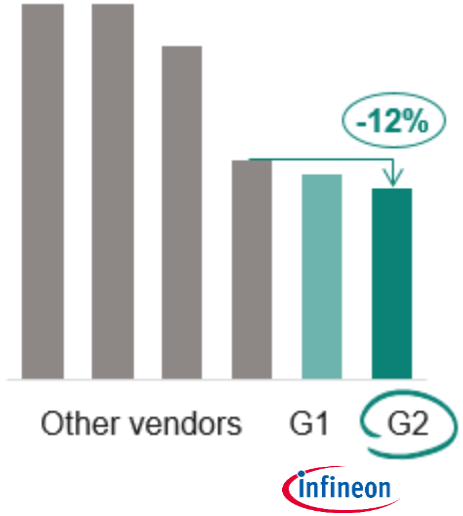
Figures-of-merit (FOM) comparison: lower is better for energy efficiency optimization

R_{DSON} x Q_{GD} (mΩ*µC) at 150°C, 800 V, 28 A:	R_{DSON} x Q_{OSS} (mΩ*µC) at 150°C, 800 V:	R_{DSON} x E_{OSS}(mΩ*µJ) at 150°C, 800 V:	The classical MOSFET FOM (from low-voltage silicon world) R_{DS} x Q_G (mΩ*µC) at 150°C:
Lower is better in hard-switching topologies	Lower is better in soft-switching topologies	Lower is better for light-load efficiency	Lower means lower gate driving power loss



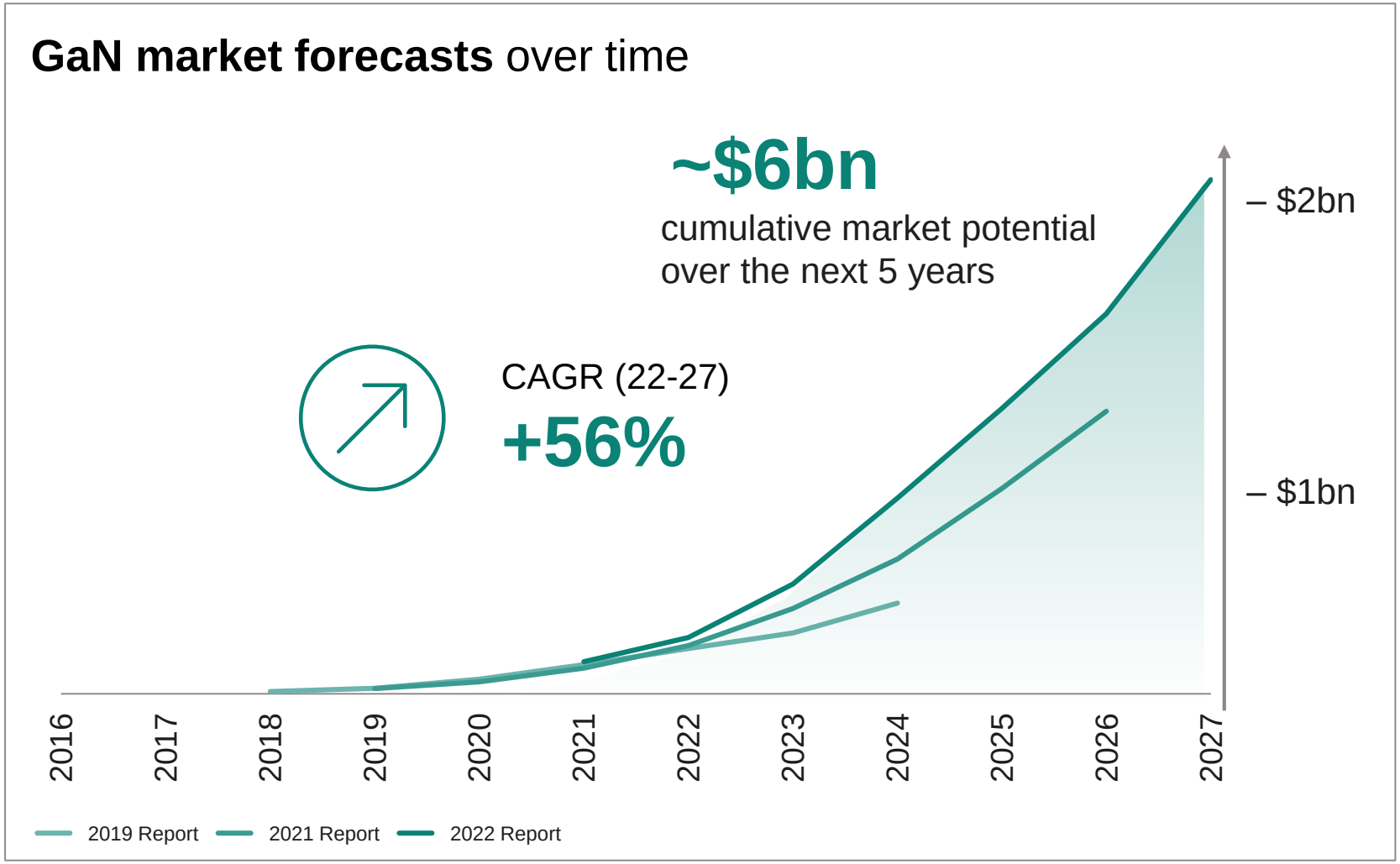






Infineon products: IMBG120R030M1H, IMBG120R026M2H.
Other SiC MOSFETs: value of parameters taken from datasheet in internet for the latest generations of 1200 V SiC MOSFETs in D2PAK 7pin: C3M0032120J1, SCT4018KW7, NTBG030N120M3S, SCT025H120G3AG,
Q_{GD} = total charge associated to C_{RSS} at given conditions, Q_{oss}= total charge associated to C_{OSS} at given conditions. E_{OSS} = total energy associated to C_{OSS} at given conditions

GaN market accelerating, driven by key power applications



- Superior switching performance results in **higher efficiency** and **lower system cost**
- Applications with **tipping point** reached or in sight

Charger, adapter

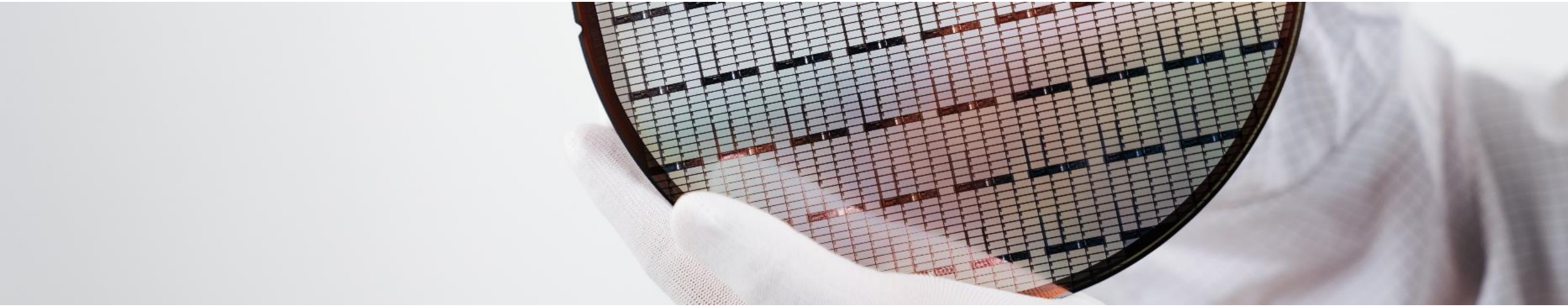
Server (high voltage)

Residential solar

On-board charger

Yole: Power GaN Report 2022 & Compound Semiconductor Market Monitor-Module I Q4 2022.

Continuing our leadership in Power Systems with the most comprehensive GaN portfolio



Leading IP & strongest R&D force

Leading patent portfolio
for GaN – >350 patent families

~450 strong GaN team
high double-digit USD m GaN R&D p.a.

Best-in-class application under-standing
incl. automotive

Leveraging foundry + IDM advantages

We own
key IP and all frontend process steps

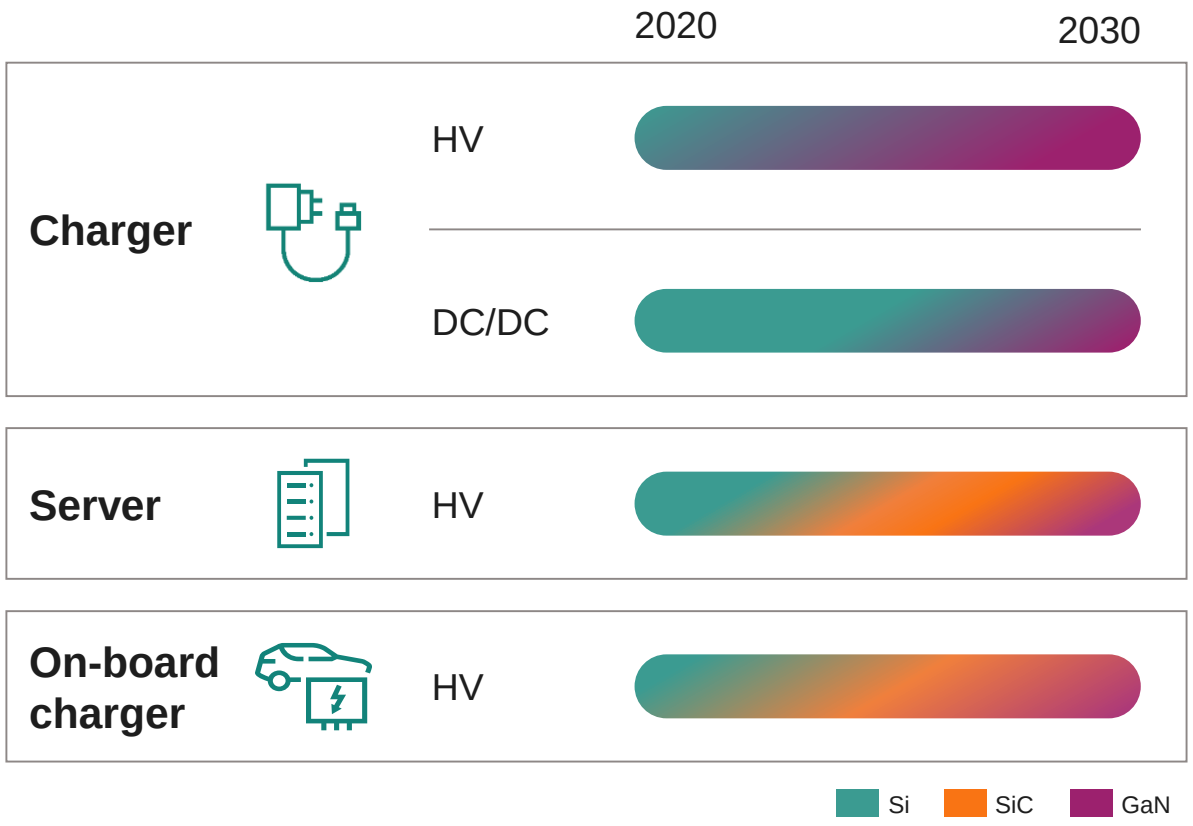
We combine
foundry partner-ships and dual-site in-house production, ready for 200 mm

We target
a leading market position

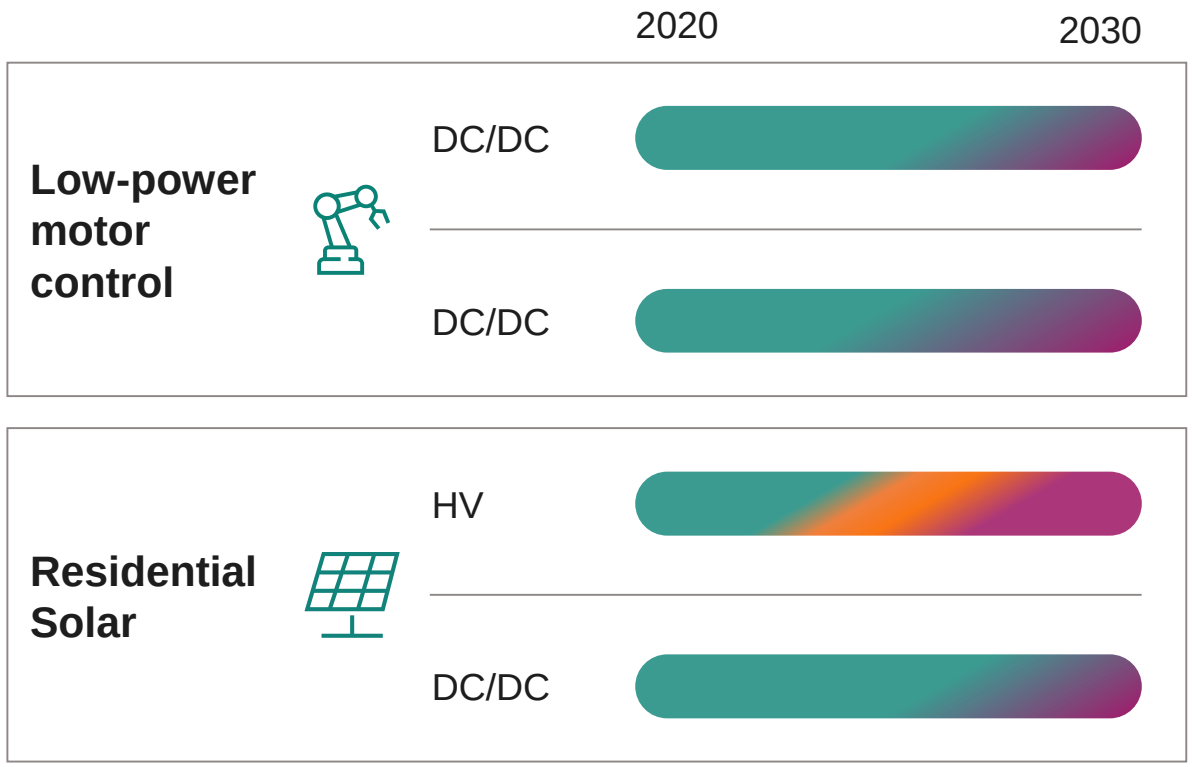
Infineon's design opportunity pipeline for Gan power in focus applications amounts to more than €3bn

GaN expected to be the preferred technology in multiple core applications by 2030, different transition paths shaping up

GaN tipping point reached/in sight



GaN transition coming up



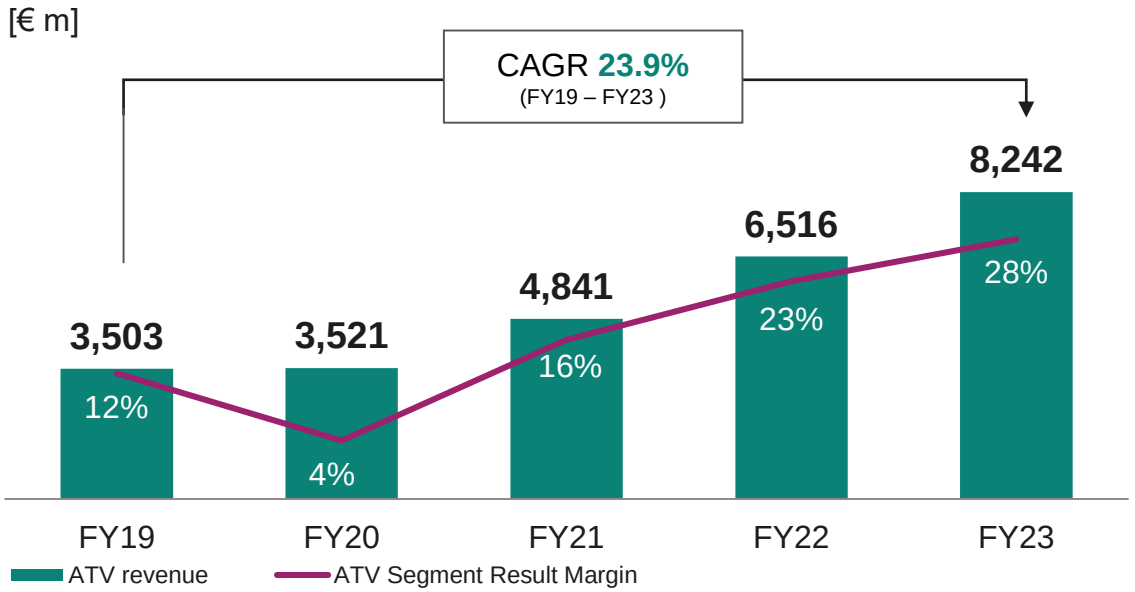
More applications likely to transition to GaN over time

Strong position to offer all relevant power semiconductor technologies creates clear customer benefits

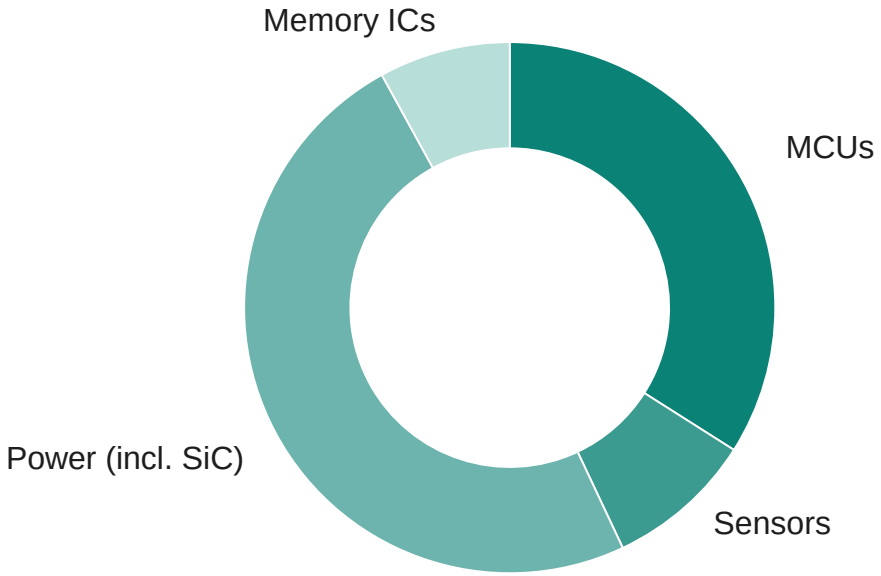
Automotive

ATV at a glance

ATV revenue and Segment Result Margin



FY23 revenue split by product group

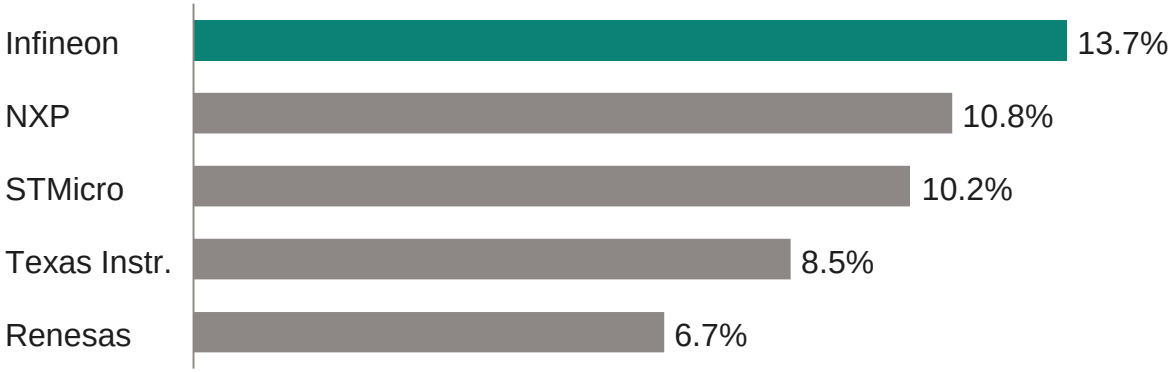


Key customers

APTIV · Astemo · BorgWarner · BOSCH · BYD · Continental · DENSO · FORVIA
HYUNDAI MOTOR GROUP · KEBODA · Mando · MAGNA · Valeo · veoneer · vitesco TECHNOLOGIES · ZF

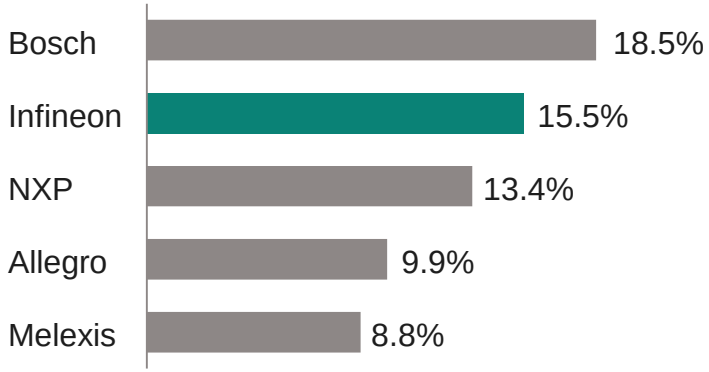
Infineon's top market position is built on system competence based on an industry-leading product portfolio

Automotive semiconductors (2023 total market: $69,200n; +16.5% y-y)

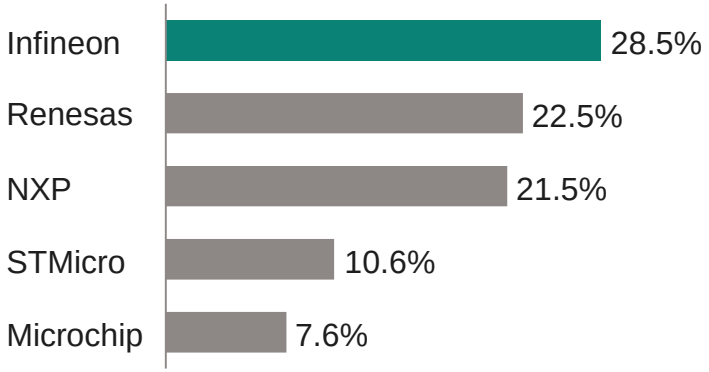


- Infineon grew by 26% y-y, gaining 1.0%-pts of market share to 13.7%, the highest level ever
- Infineon outgrew the market in all regions
- In MCUs, Infineon grew by 44% y-y (about twice as fast as the market), becoming the new #1
- Continuing #1 position in power semiconductors based on industry's broadest product portfolio
- Undisputed #1 in automotive NOR Flash memory ICs

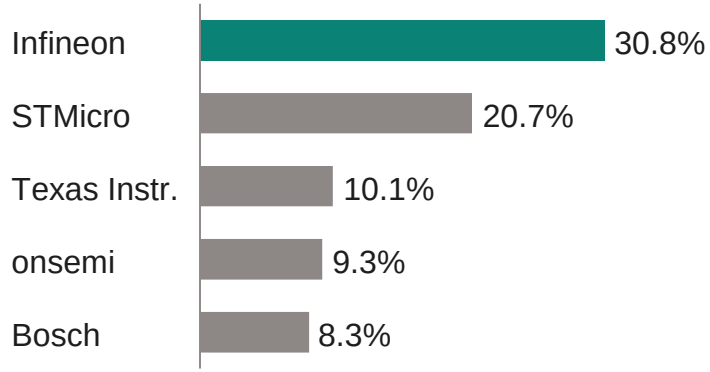
Sensors



MCUs



Power semiconductors



TechInsights: *Automotive Semiconductor Vendor Market Shares*. March 2024. Sensors: S&P Global: *Automotive Semiconductor Market Share Database*. April 2024.

Automotive semiconductor market expected to continue its growth journey even at flat light vehicle production growth

Applications	Market outlook for CY24
Automotive	→ – Stable vehicle production in 2024 – Vehicle affordability concerns persist, despite recent OEM price cuts – No major semiconductor shortage expected
e-mobility	↗ – Growth in xEV, albeit at slower rate in Western markets – High demand in China, including PHEVs and REEVs – Introduction of affordable BEV models by end of 2024 and 2025 will attract new customer base
Autonomous driving	↗ – Growth of ADAS/AD continues – also driven by higher xEV share which usually offer higher levels of car autonomy and more advanced E/E architecture platforms – First small-scale robotaxi projects launched

Several strong content growth drivers for Infineon, even at flat LV production

Several structural trends fueling our growth

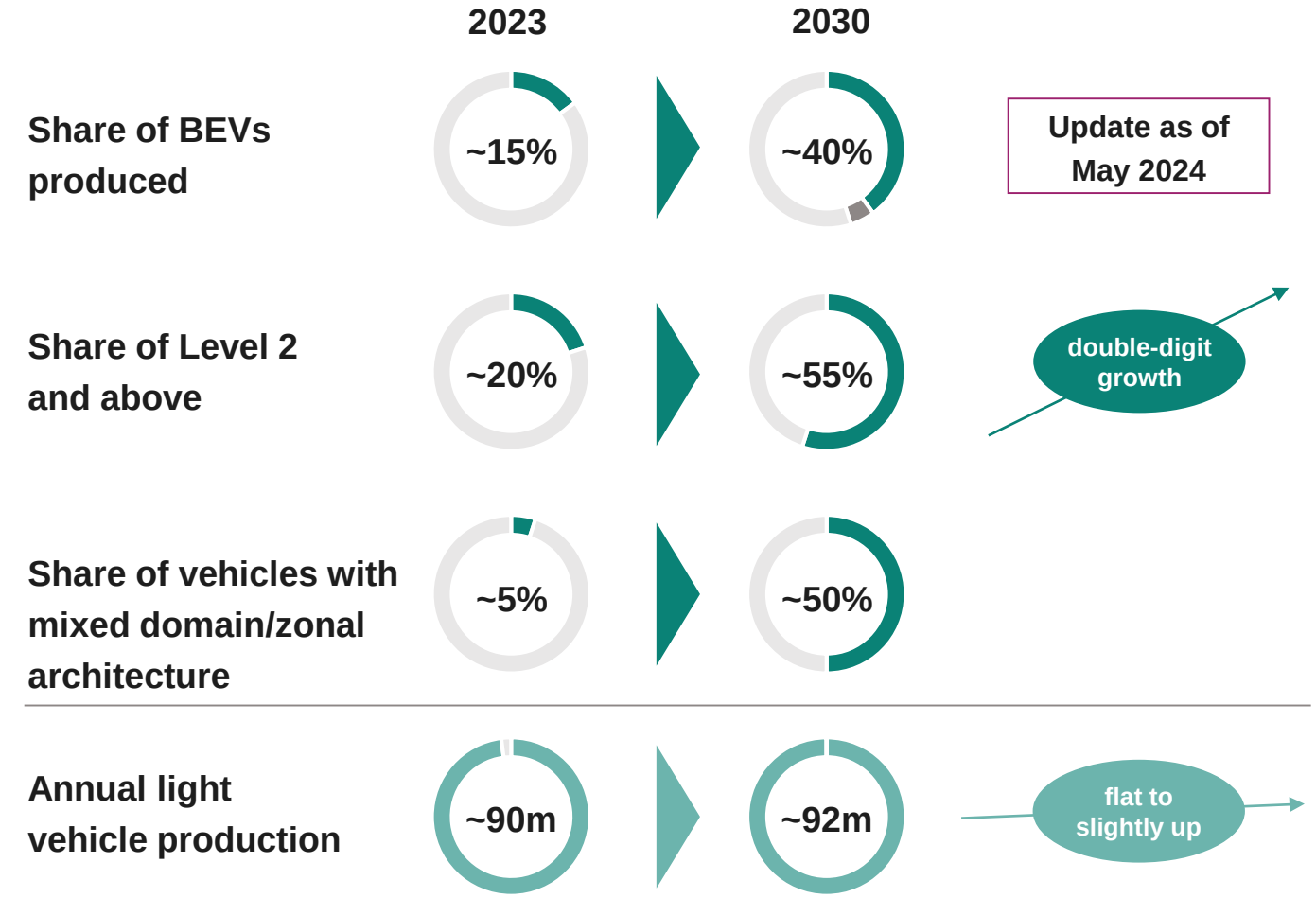
xEV
- Strong volume growth of BEVs and PHEVs
- Increasing share of SiC in traction inverters
- Larger batteries lead to higher BoM in BMS

ADAS/AD
- Need for functional safety, redundancy
- More sensors, more computing performance

E/E architecture
- SW-defined cars with higher need for connectivity
- Centralized signal processing by zone computers
- Smart switches for decentralized power distribution

Comfort and premium features
- More loads (motors, heating, cooling etc.)
- Elaborate interior and exterior lighting

Overview of growth vectors until 2030

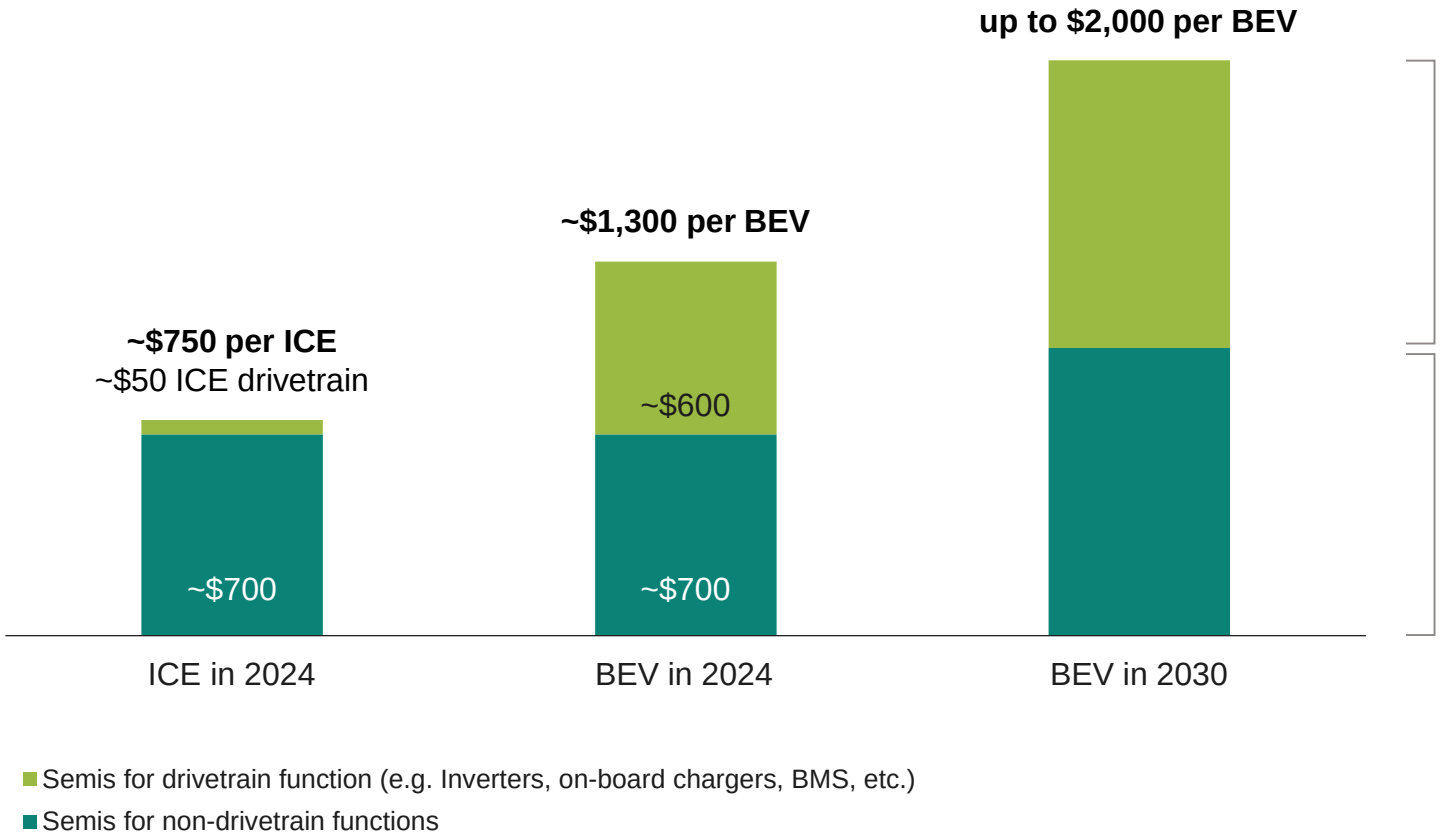


Infineon estimates

Infineon is the world leader in automotive semis, serving all key applications and benefiting strongly from content growth

Semiconductor bill-of-material in a car in 2024 and 2030

[USD]



Key applications for drivetrain semis:

- Inverter
- On-board charger (OBC)
- DC-DC converter
- Battery management system (BMS)
- Auxiliaries

Key applications for non-drivetrain semis:

- Autonomous and automated driving (ADAS/AD)
- Safety and advanced security
- Comfort and premium
- Connectivity
- Infotainment

Based on TechInsights: *Global xEV System Semiconductor and Sensor Demand Forecast 2019-2028*. October 2023; Infineon

A very broad portfolio with >300 product families is backing the market leadership of Infineon in Automotive

Infineon ATV division revenue by product families:

Major categories[1]: AURIX™ families, CoolSiC™, IGBT 750V, IGBT 1200V, MOSFETs, PROFET™, Radar, TRAVEO™ – none more than ~10%

Unmatched customer value creation and portfolio resilience

Leading technologies	System competence (P2S)	Broadest portfolio

1 In alphabetical order

Number of power MOSFETs per car continues to increase, and drives accelerated growth for the leading portfolio

Examples of MOSFET applications

Power door
Power lift gate
Brake booster
Electric power steering
HV-LV DC-DC conversion
BMS
Transmission control
Windshield wiper
Electric parking brake
HVAC blower
Sunroof
Side mirror
Seat adjustment
Thermal management
12 V battery switch
Power supply protection

Latest portfolio with constant innovation

Technologies, packages and voltages

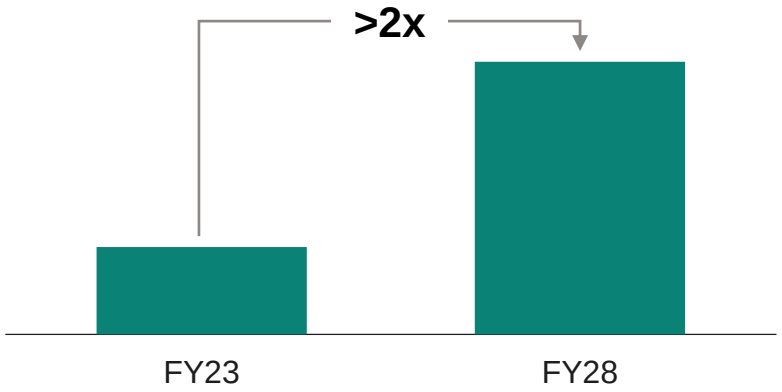
OptiMOS™ 7
OptiMOS™ 6
OptiMOS™ 5
OptiMOS™ T, T2, Gen 12.7

40 V
60 V
80 V
100 V
120 V

New **OptiMOS™ 7** family with outstanding technical performance

- 100 to 180 MOSFETs are used per vehicle in ~90 different applications in all segments: body, chassis, safety, ADAS/AD, powertrain
- Infineon offers broadest portfolio (>600 products) and eco-system to address specific and high-margin applications:
  - embedded control, gate driver, MOSFETs, software, P2S
  - entire eco-system with digital twins
  - simulation environment (esp. for motor control)

Infineon's revenue growth

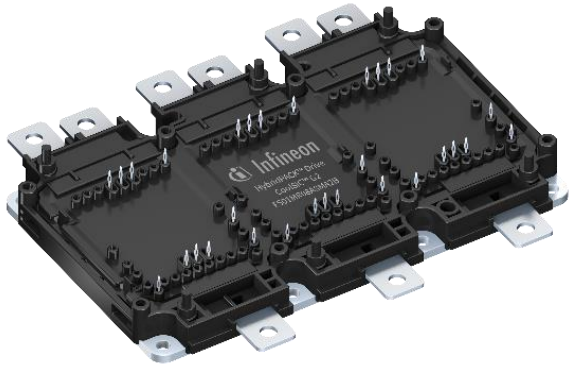


Electromobility

Xiaomi SU7 Max: Infineon contributes > 60 different components, incl. 2x HybridPACK™ Drive G2 CoolSiC™ 1200 V power modules

Infineon provides system solutions with > 60 different components for more than 10 applications

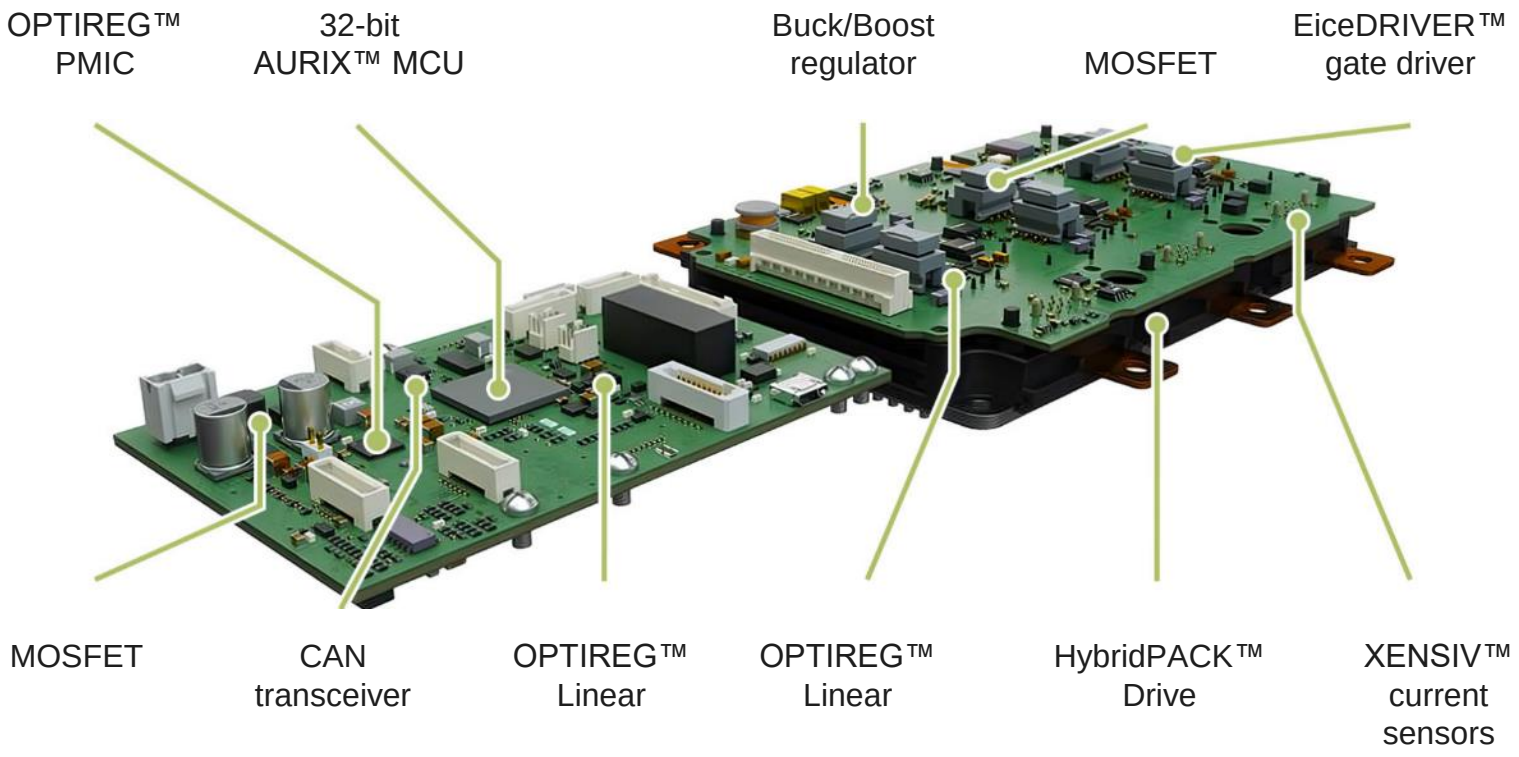
- **MCUs, PMICs:** AURIX™ TC3, TRAVEO™ T2G, and PSoC™ for zone controller, ADAS, xEV drivetrain, and suspension
- **2x HybridPACK™ Drive G2 CoolSiC™ 1200 V** power modules or bare dies and gate drivers for traction inverter in Xiaomi SU7 Max
- **PROFET™** for E/E architecture
- **MOSFET**s, system basis chips, others



Courtesy of Xiaomi

Infineon’s broad product portfolio and system understanding enable higher BoM and allows for compact designs and fast T2M

Infineon inverter reference design, covering up to 95% of value



P2S (product-to-system approach)

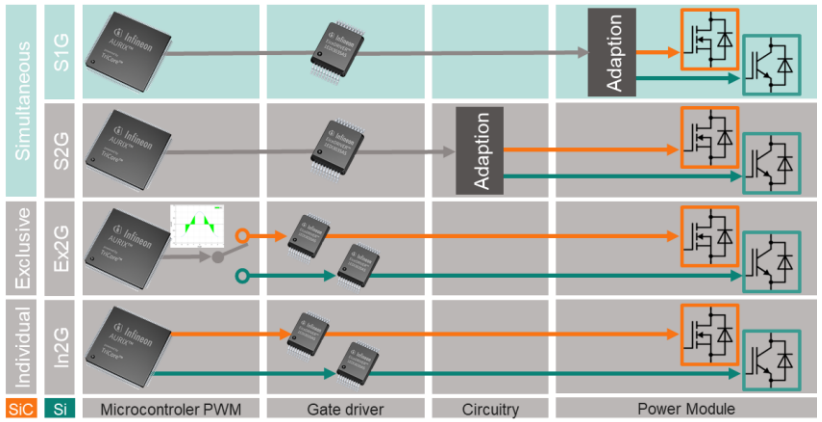
- Reference design for up to 300 kW, further customization possible
- System solution for easy implementation
- Fast time-to-market (T2M)

Freedom of choice

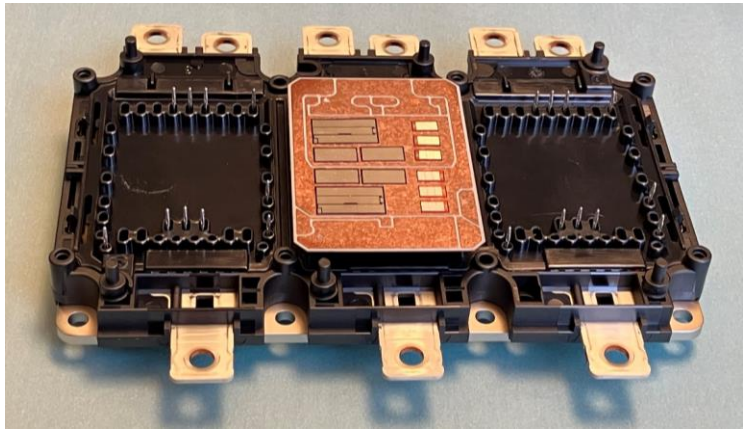
- IGBT and SiC in 750/1,200 V scale up to preferred power class
- HybridPACK™ Drive CoolSiC™ Gen2 continuous operation at 175°C
- EiceDRIVER™ gate driver Gen3 optimized for CoolSiC™
- Optimized 32-bit AURIX™ MCU

First Si/SiC fusion module concept (Si^2C) significantly exceeding performance expectations without adding system complexity

Example: 400 V BEV 175 kW 2WD



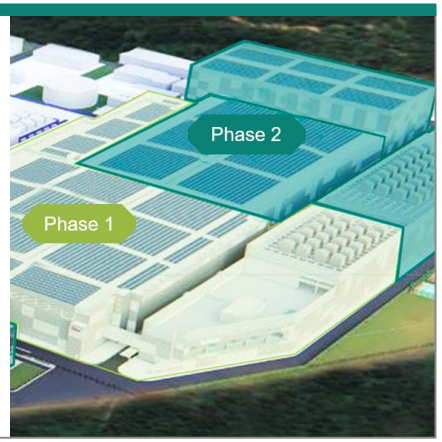
Infineon solution offers compelling cost-performance ratio without adding system complexity for customers



World-scale capacity, unmatched portfolio breadth and our worldwide customer base lead to accelerated growth in SiC

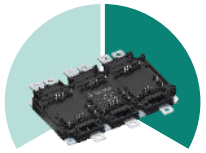
Leading SiC technology and production efficiency

- Unrivaled productivity with world-scale fab and most diversified supplier network
- Superior trench technology and highest reliability
- Extensive packaging portfolio and complete system competence

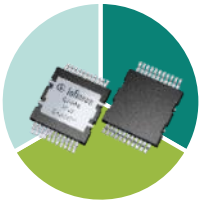


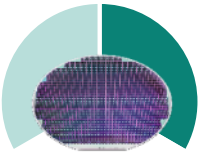
Most scalable SiC auto portfolio

650 V | 750 V | 1,200 V


Module


DSC/SSC module


Discrete

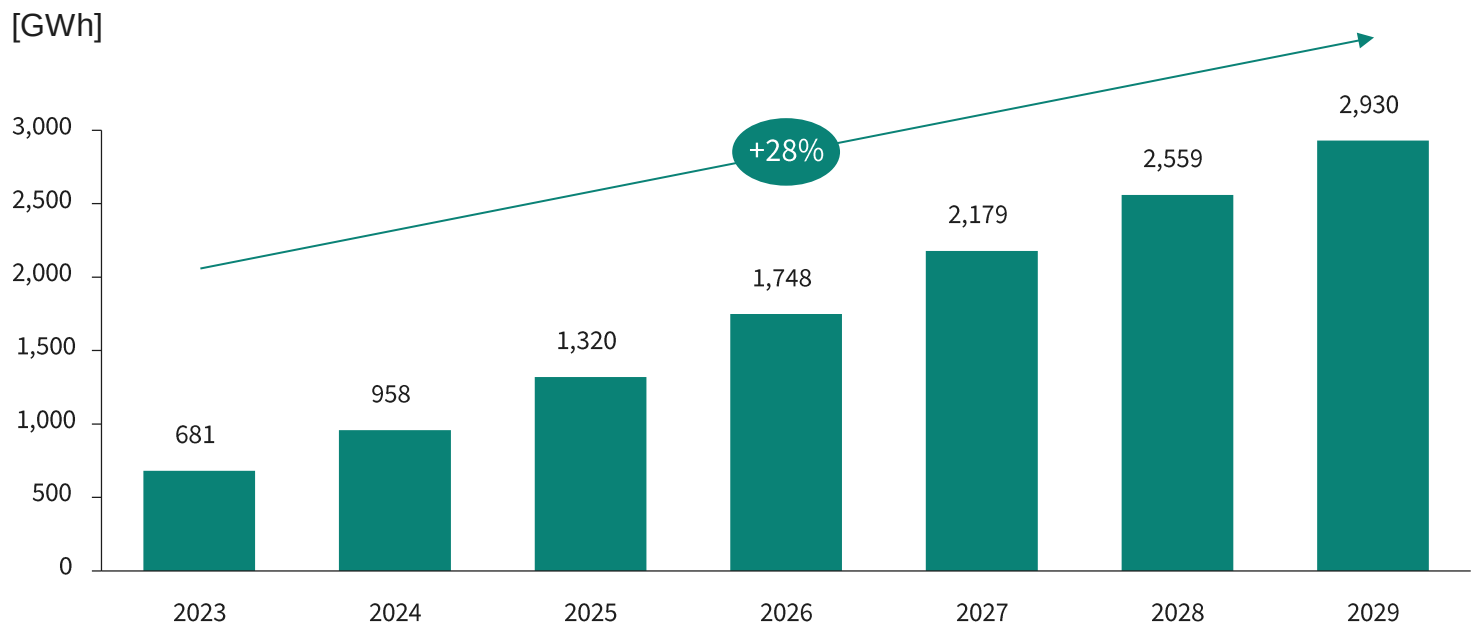

Bare die

Continued strong SiC design-win momentum

BMW, BOSCH, 长安汽车 CHANGAN, CHERY, CHRYSLER, DELTA, FIAT, Ford, GENESIS, HOZON 合众汽车, HYUNDAI, JOHN DEERE, KIA, LEAPMOTOR, LYNK & CO, RAM, RIVIAN, SAIC, smart, STELLANTIS, US BEV OEM, TOYOTA, Valeo, vitesco TECHNOLOGIES, VW, mi, XPENG

Infineon's extended BMS (battery management system) product portfolio paves the way for an exceptional growth story

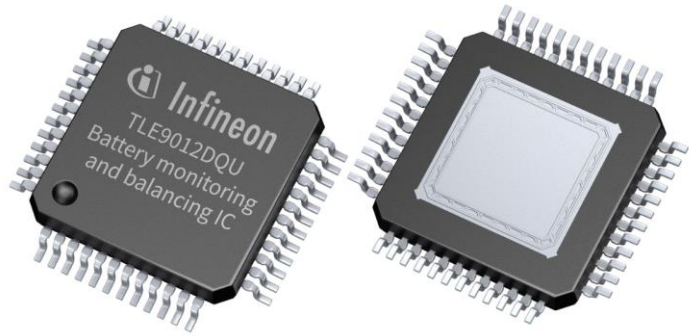
Demand for BMS analog frontend ICs driven by BEV battery capacity



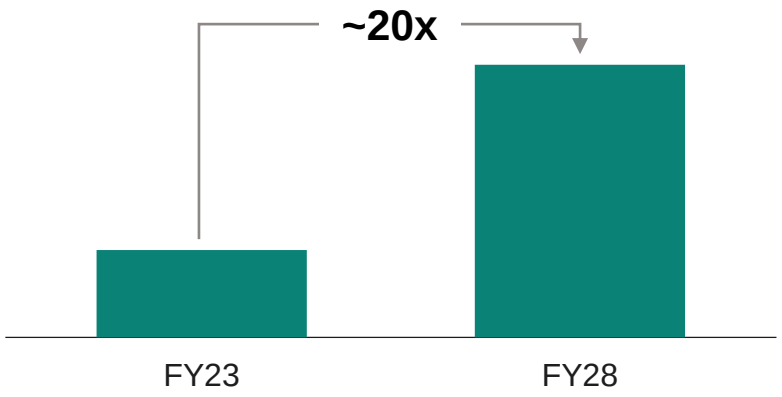
Source: S&P Global Mobility, December 2023

- Drivers for BoM: increasing battery capacity, more cells, more channels
- Triple-digit million € design-win in pipeline
- Additional upside from non-automotive markets: ESS, street lighting, forklifts

BMS analog frontend IC



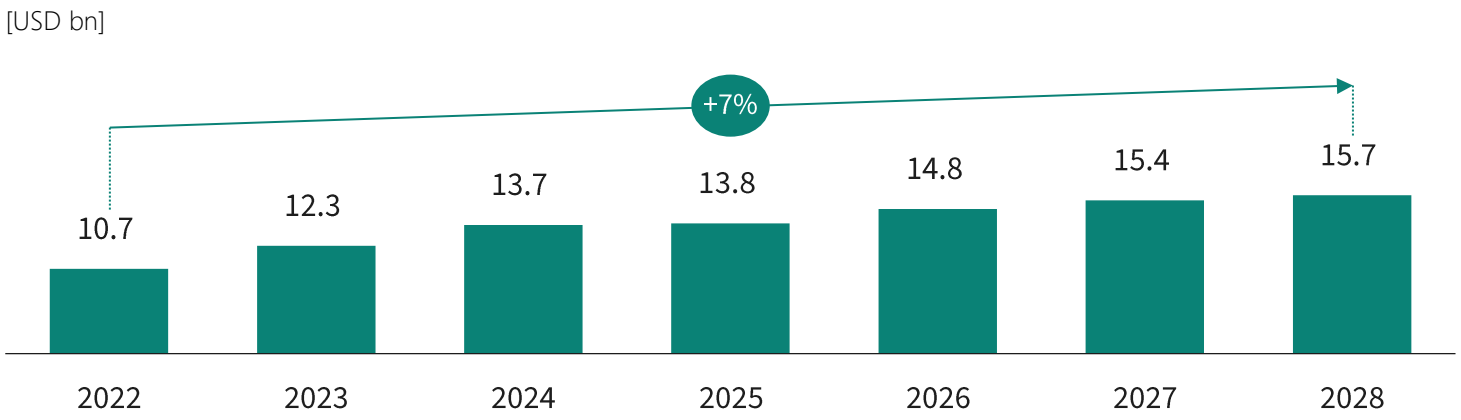
Infineon's revenue growth



Automated Driving

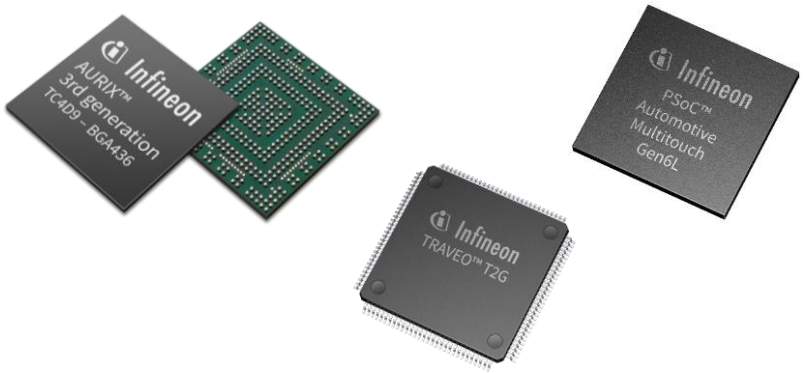
AURIX™ MCU is the gold standard for ADAS/AD, control, safety, and high-speed in-vehicle network

Total automotive MCU market development, excl. MPUs and SoCs



TechInsights: *Automotive Semiconductor Demand Forecast*. October 2023

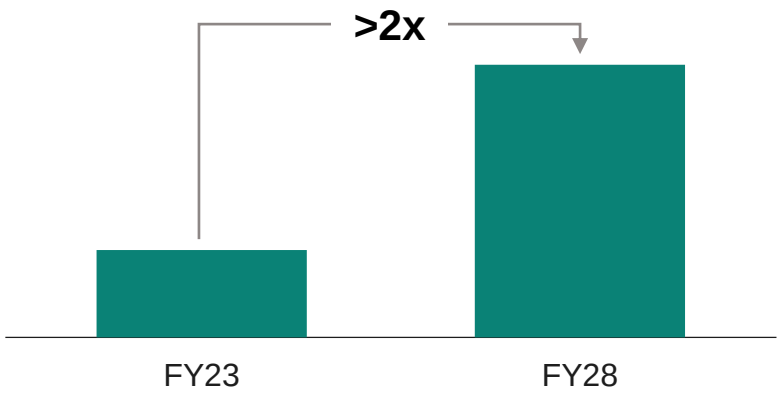
AURIX™, TRAVEO™, and PSoC™ families



€19bn MCU design-win volume secured

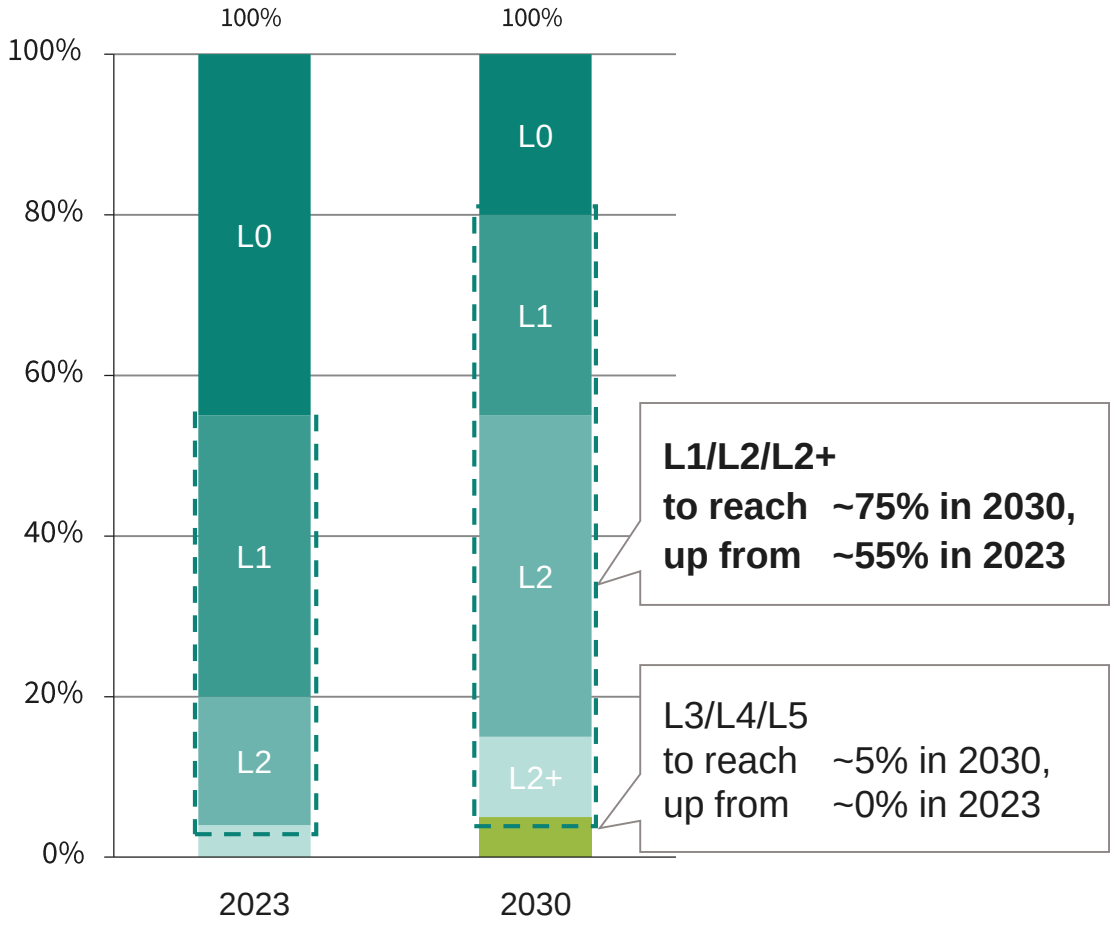
- Total automotive MCU design-win volume in the last four years exceeded €19bn
- Design-wins covering current and next decade ensuring robust and long-lasting growth
- Up to 40 MCUs per vehicle awarded to Infineon
- Strongest momentum in essential MCUs for E/E architecture, ADAS/AD, and xEV
- Around €3bn of revenues already in 2023

Infineon's revenue growth



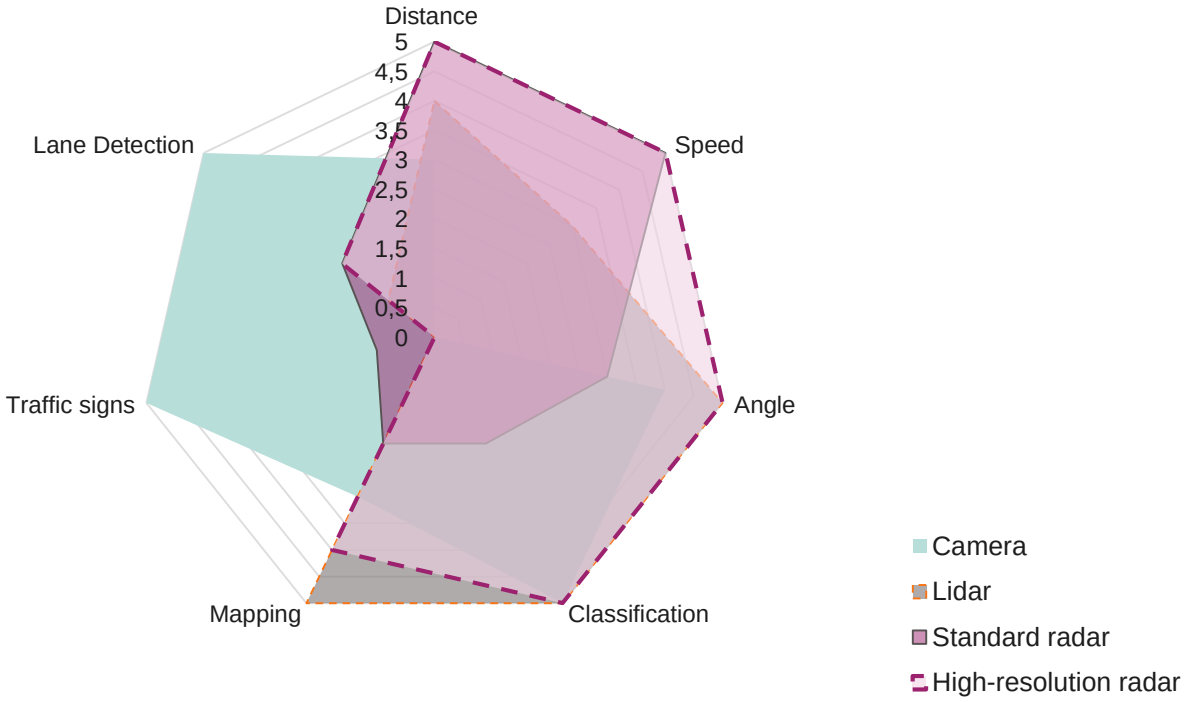
Growth of L1/L2/L2+ is the main driver of ADAS semiconductor content until 2030

Car production by degree of automation (SAE level)



Market research companies; Infineon

Radar is essential to meet decisive requirements of ADAS/AD

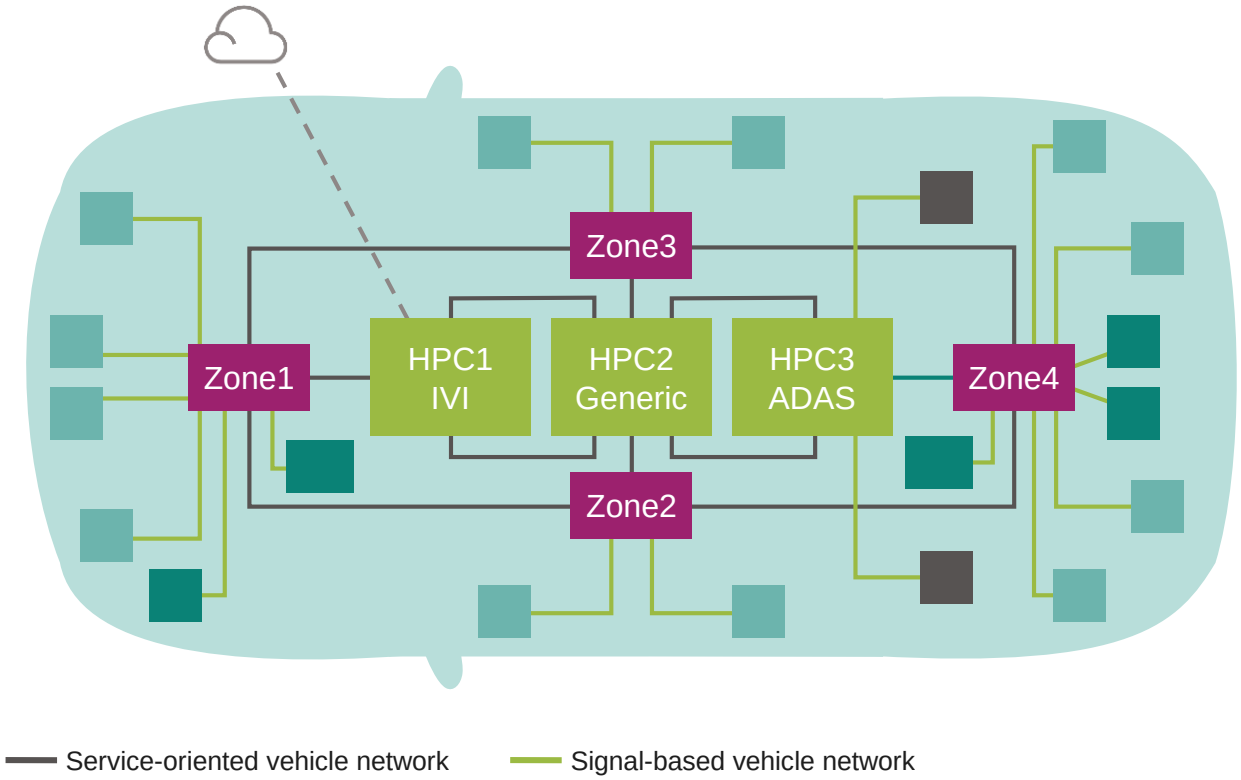


- Standard radar is **the** technology to detect distance and speed
- High-resolution radar significantly improves angle and classification

E/E architecture

Infineon strongly benefits from new E/E architectures that drive centralization of data and decentralization of power distribution

E/E architecture in a software-defined vehicle



New E/E architectures lead to more centralized processing of data and signal while more decentralized power distribution.

Components of E/E architecture and corresponding applications addressed by Infineon

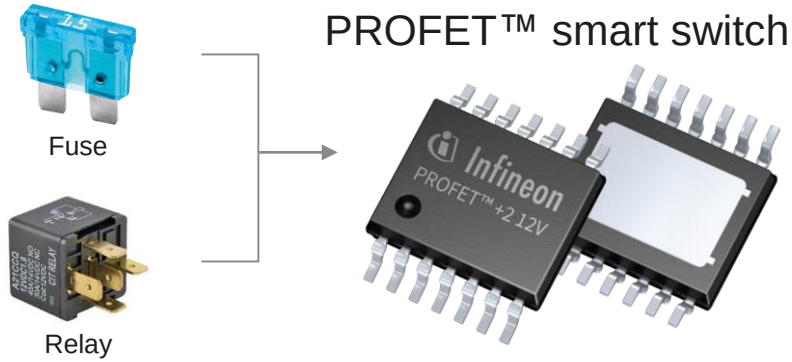
High Performance Computing (HPC)	Safety companion MCU for service-oriented SoCs, secure trust anchor, fail-safe power supply
Zone	Zone controller, gateway controller, incl. protocol translation, smart power distribution
Control	Smart real-time mechatronics (e.g. transmission, motor control, power steering, braking), BMS
Complex sensors and actuators	Radar, incl. signal pre-processing, bus connections, dedicated AI accelerators, camera
Simple sensors and actuators	Smart functional ECU (e.g. seat adjustment, power window, central lock, wiper), touch pad

Power distribution becomes a critical aspect of the E/E architecture and the SW-defined vehicle

New applications for intelligent power distribution ...

Power connection & isolation | Load control & self protection | Wire protection | Load supply protection | Active during parking

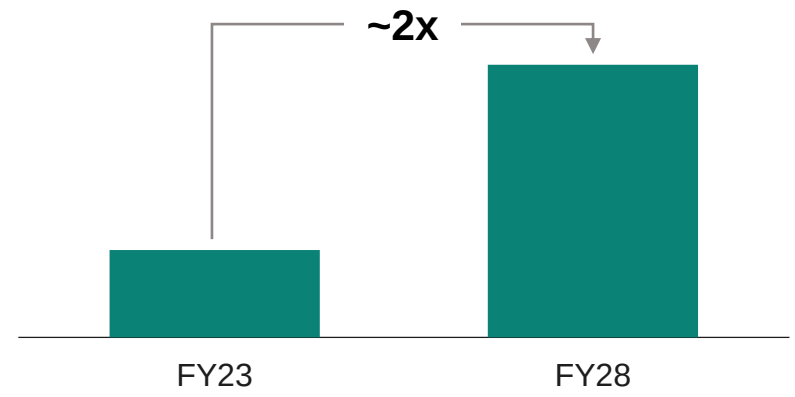
... are driving replacement of fuses/relays



Smart switches are mandatory for SAE L3 and above

- Superiority of semiconductors over fuses and relays:
  - Fast failure isolation (< 500 µs) and activation of an alternative supply
  - Configurable wire protection
  - Diagnosis and non-destructive recovery
- Mandatory for SAE levels L3, L4 and L5
- Growth of smart switches per car:
  - Volume OEMs: from today's ~50 pieces/car towards ~200 pieces/car by 2028+
  - Innovator OEMs: already ~200 pieces/car today

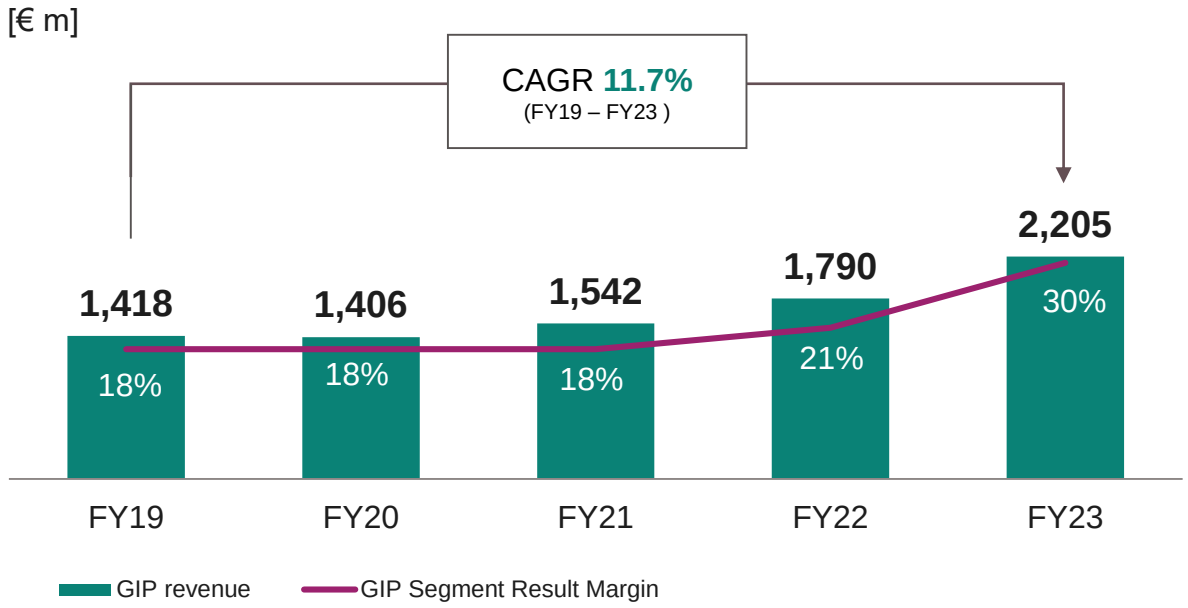
Infineon's revenue growth



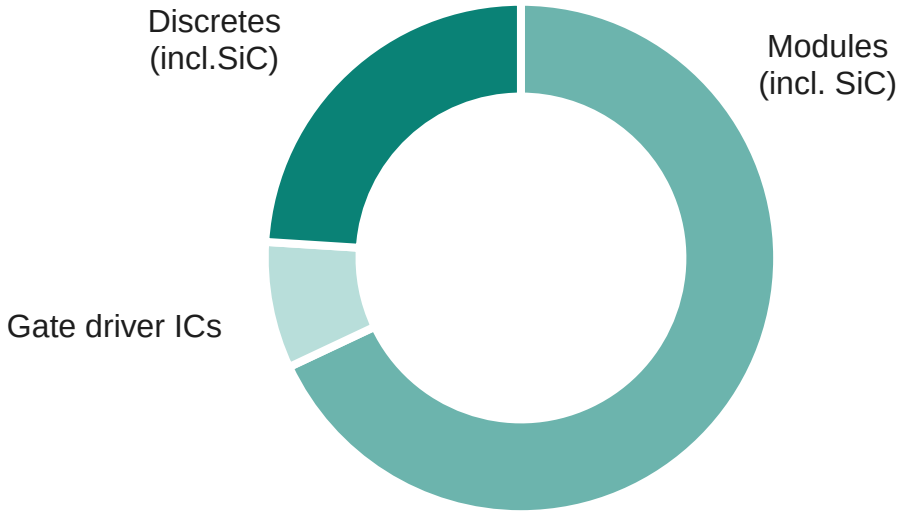
Green Industrial Power

GIP at a glance

GIP revenue and Segment Result Margin



FY23 revenue split by product group

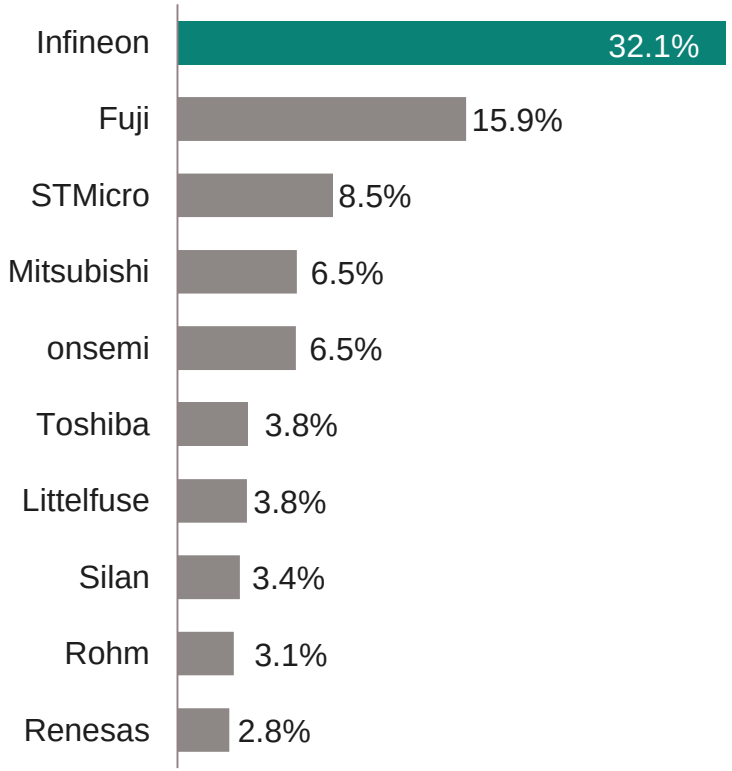


Key customers

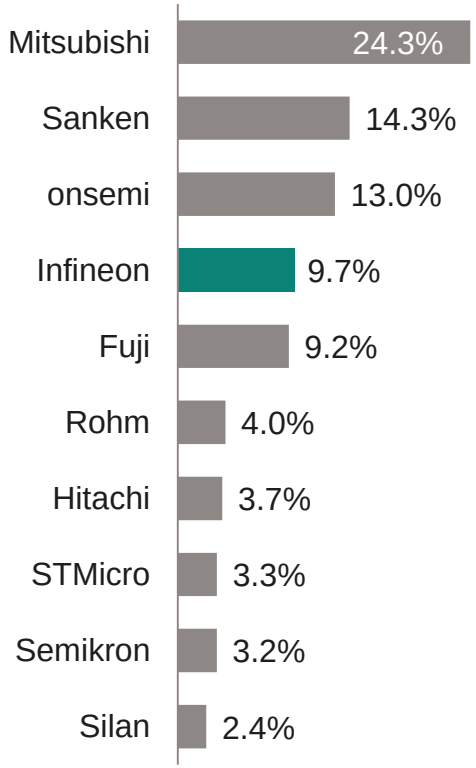
ABB, Aalpitronic, ALSTOM, Bloomenergy, 中国中车 CRRC, GOLDWIND, INOVANCE, LG, Midea, OMRON, Rockwell Automation, Schneider Electric, SEMIKRON DANFOSS, SIEMENS, SMA, SUNGROW, Vestas, YASKAWA

Clear leader in discrete IGBTs and IGBT modules

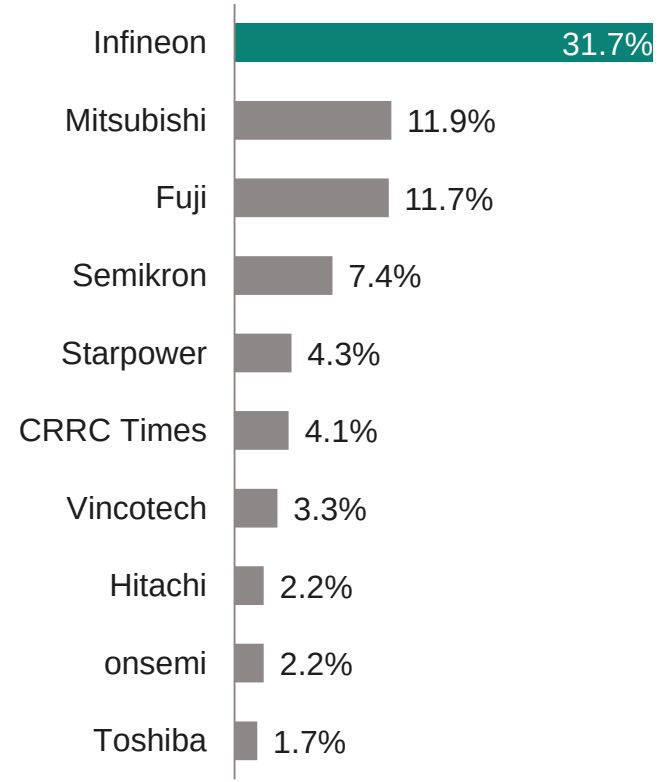
Discrete IGBTs
2022 total market: $2.5bn



IPMs[1]
2022 total market: $2.1bn



IGBT modules[2]
2022 total market: $4.4bn



[1] Including MOSFET-based IPMs and IGBT-based IPMs
[2] Including standard (non-integrated) IGBT modules and power integrated modules (PIMs)/converter inverter brake (CIB) modules.
Based on or includes content supplied by Omdia, "*Power Semiconductor Market Share Database 2022*", Final Version V2 September 2023.
Results are not an endorsement of Infineon Technologies AG. Any reliance on these results is at the third party's own risk.

Power Infrastructure demand remains strong while in major verticals inventory corrections persist

Applications % of FY23 segment revenue[1]	Market outlook for CY24
~26% Renewable Energy Generation	→ – PV installations continue to grow, in 2024 channel inventory temporarily limits PV inverter shipments and respective semi demand – Growth in wind installations underpinned by policy momentum mainly relies on onshore projects
~11% Power Infrastructure	↗ – Healthy demand for UPS (uninterruptible power supply), with growth potential driven by investments in datacenters – EV Charging demand continues to be on growth track, especially for fast charger infrastructure – Need for grid expansion drive investments in Transmission & Distribution and Energy Storage
~12% Transportation	↗ – Rail market in recovery, additional push expected by GC government investment – eBus growth trend confirmed, eTruck may be limited by installed charging infrastructure
~28% Automation & Drives	↘ – Analysts expect improvement in 2H2024 with heterogeneous picture in regions and sectors, semi market recovery expected to follow gradually, investment confidence still cautious due to current interest rate levels
~11% Heating, Ventilation, Air condition	→ – Persisting excess inventory and weak real estate markets limit market growth
~6% Home Appliance	→ – Still no strong and sustainable sign of demand recovery, consumer sentiment remains low

[1] Does not sum up to 100% due to other applications not shown here

Huge potential along entire green energy chain until 2030 according to IEA Net Zero scenario

Generation

Photovoltaic	**+4,600 GW**
Wind power	**+1,900 GW**

Infrastructure

Grid network	**$600bn annual investments**
Grid storage	**+900 GW**
EV charging	**+185m chargers (public and private)**
Electrolysis	**+560 GW**

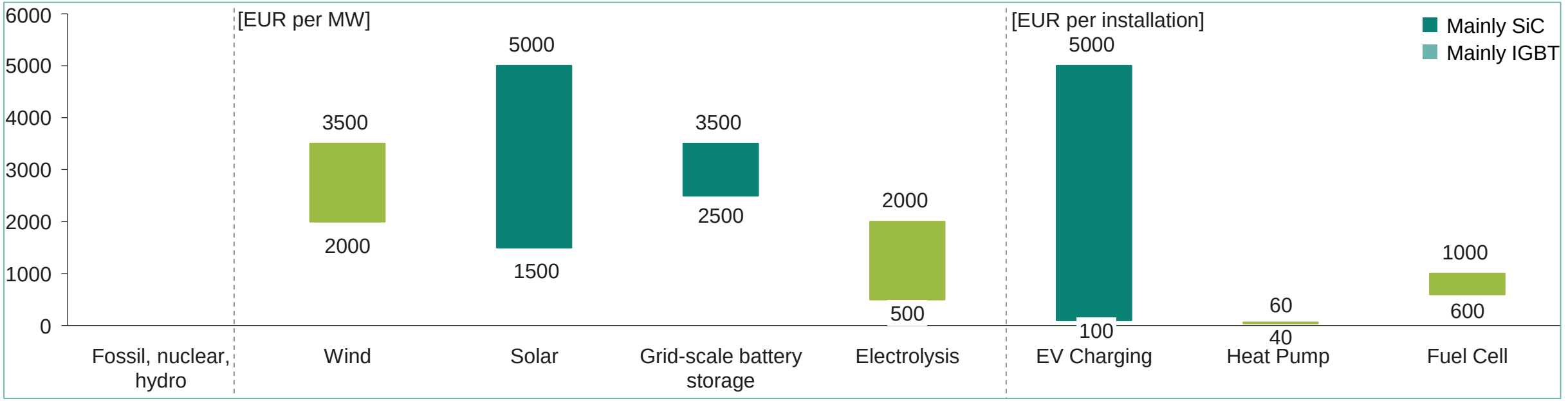
Consumption

Heat pump	**+420m units**
H_2 Fuel cell[1]	**+200k FC EV +200k FC Trucks**
eAviation | eMarine	

Note: Based on Net Zero Scenario (IEA) | Source: IEA - World Energy Outlook, October 2023, **1** Internal Analysis

Green energy generation provides large business opportunities

Power semiconductor content by application

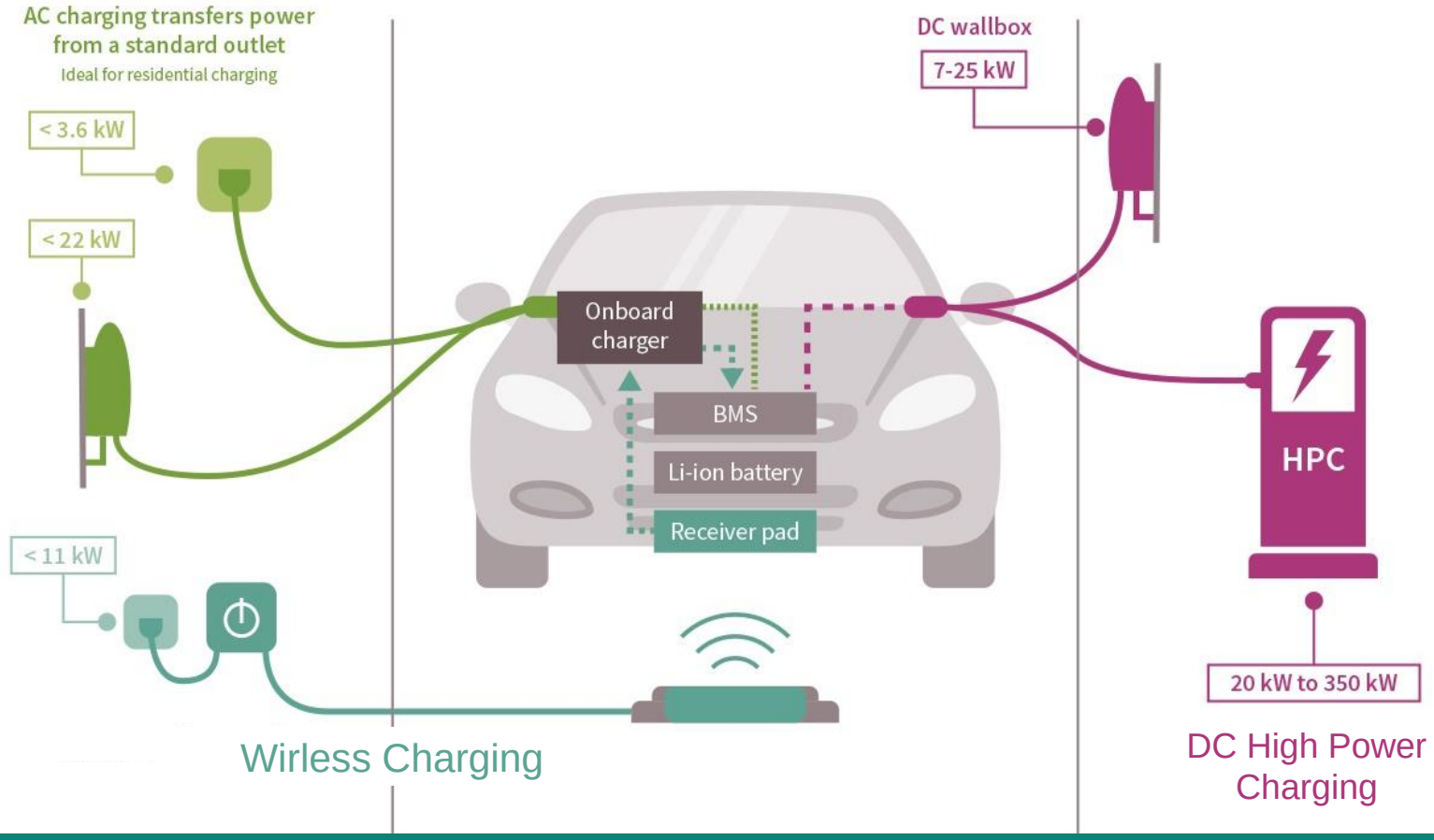


Additions in 2022[1)]	**74**[GW]	**220**[GW]	**12**[GW]	**<1**[GW]	**~6m**[inst.]	**22m**[inst.]	**5k**[inst.]
CAGR 2023 – 30	**16%**	**23%**	**56%**	**92%[2)]**	**31%**	**16%**	**42%**

[1] IEA: World Energy Outlook, October 2023; Sector Tracking reports October 2023; internal Analysis
[2] Based on 270 GW pipeline (midpoint), >100% based on NZE requirements of 560GW

EV charging is a key strategic application for Infineon
We cover the full ecosystem from AC to high power DC charging

Connectivity solutions	Automotive systems	High power industrial systems

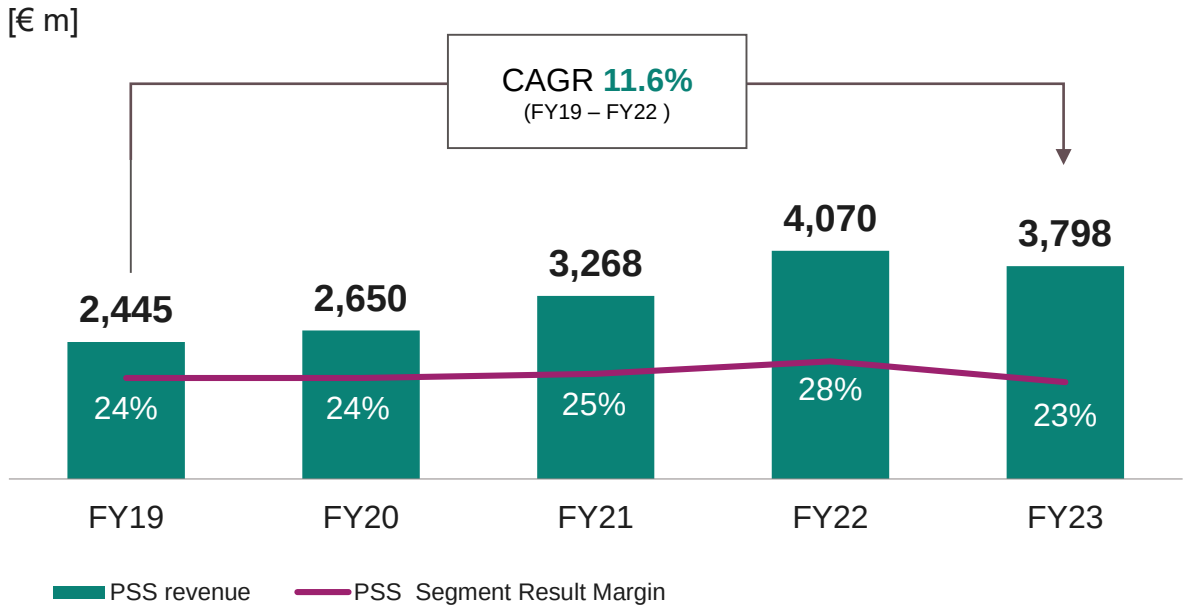


Infineon targets the complete EV charging ecosystem from AC to high-power DC

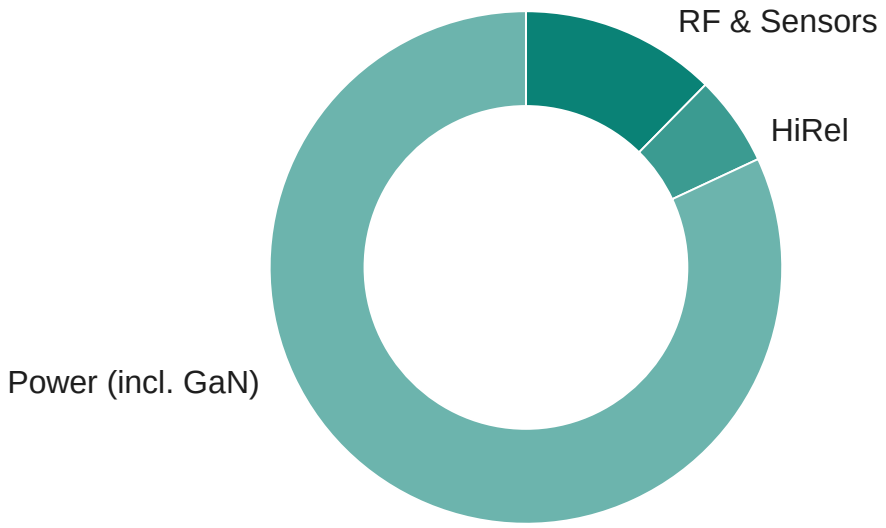
Power &
Sensor Systems

PSS at a glance

PSS revenue and Segment Result Margin



FY23 revenue split by product group



Key customers

amazon · cisco · DELL · DELTA · ERICSSON · ENPHASE · Google
hp · LITEON · Makita · Panasonic · SAMSUNG · solaredge · ZTE

Weakness in most verticals to persist with expected improvement during the course of CY 2024

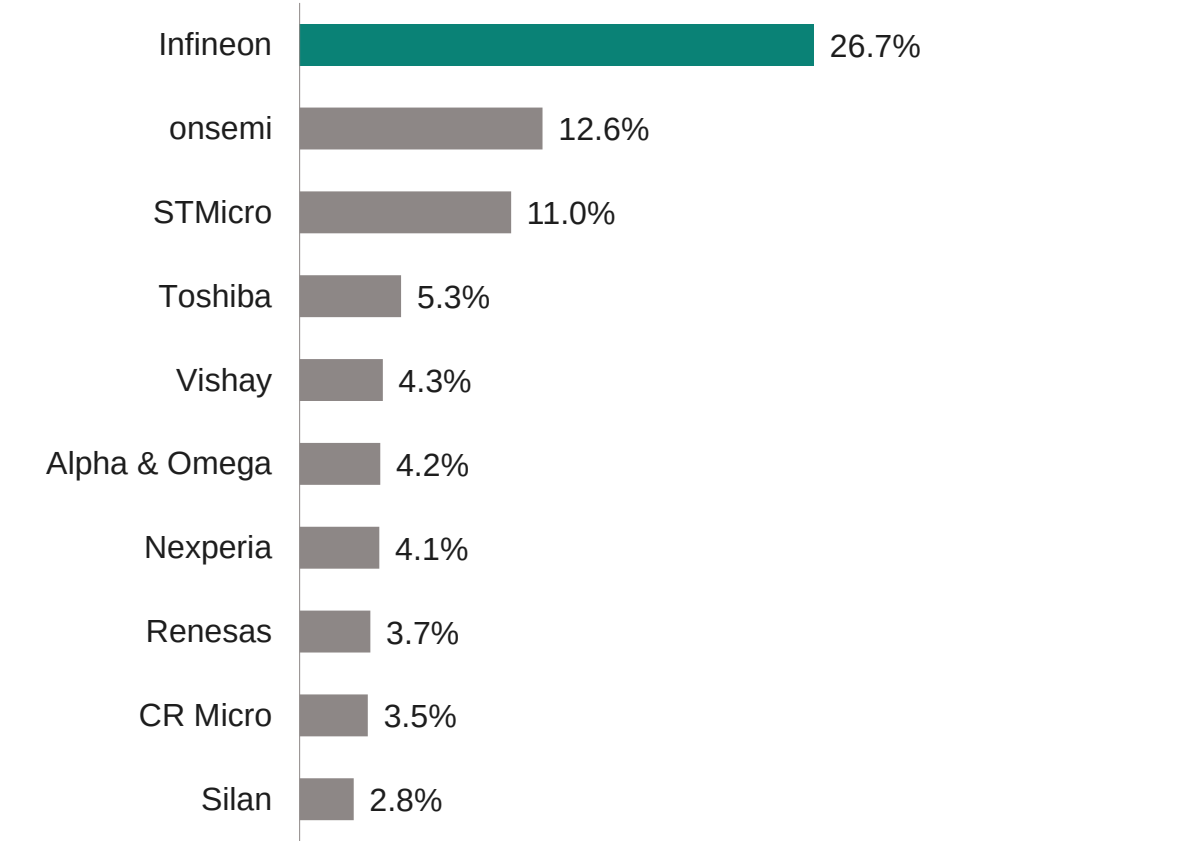
Applications % of FY23 segment revenue[1]	Market outlook for CY24
~15% Computing	– Server weakness to extend through H1 CY24 with potential recovery in H2 – benefits from AI opportunities due to increasing semi content – PC market shipments are expected to recover in course of CY24, but to remain below pre-pandemic levels
~10% Communications	– Telco capex is forecasted to be flattish and slightly negative in wireless – Demand in H1 CY24 will be weak but with some upside potential in H2
~7% Smartphones	– In CY24, y-o-y growth in smartphone shipments expected, recovery should have momentum in H2 CY24
~24% Consumer	– Weak macro environment and related inventory digestion persists in H1 CY24, return to growth possible in H2
~35% Industrial	– Flattish y-o-y development as weakness in residential solar and automotive markets came in late, reducing growth prospectives

[1] Does not sum up to 100% due to other applications not shown here

Infineon is the clear leader in MOSFETs, additional growth potential in power ICs

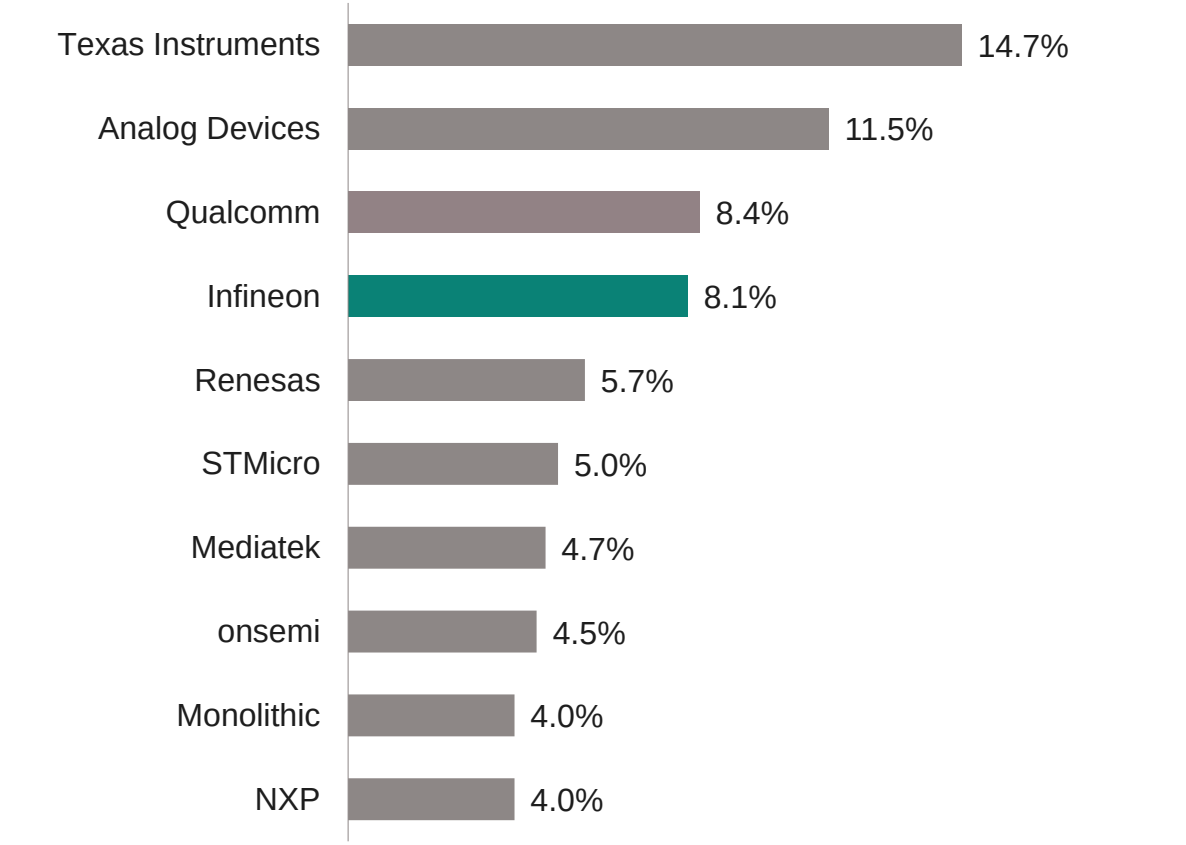
Discrete Power MOSFETs[1]

2022 total market: USD 13.1bn



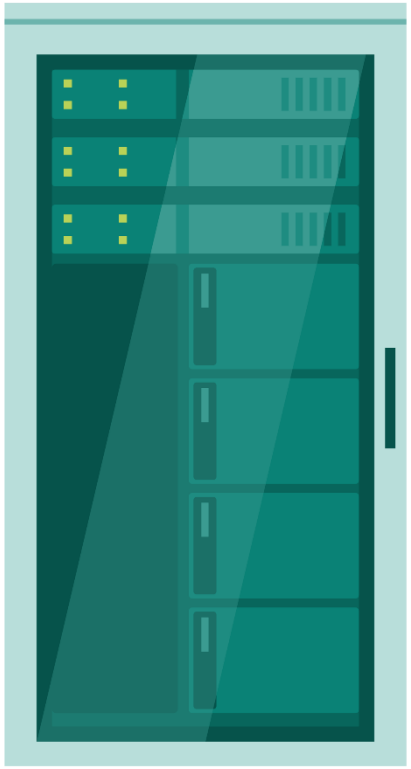
Power ICs[2]

2022 total market: USD 32.3bn



[1] Discrete Power MOSFET market includes automotive MOSFETs, Si Power MOSFETs, SiC Power MOSFETs, Si Protected MOSFETs and GaN Power Transistors [2] Power IC market includes automotive power ICs.
Based on or includes research from Omdia: *Power Semiconductor Market Share Database 2022.* September 2023. | Results are not an endorsement of Infineon Technologies AG. Any reliance on these results is at the third party's own risk.

Average Infineon BOM per AI server about 850 to 1800 USD

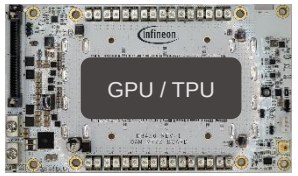


1 Server rack includes

4 AI servers

DC/DC converter 48-12V:

10 USD



AI card

(power stages or vertical modules)

50-200 USD

x 8

GPU tray

Chassis

Power supplies

x 6

Power supply (AC/DC)

(Si-, SiC and GaN based)

20-100+ USD

x 1

Server Motherboard

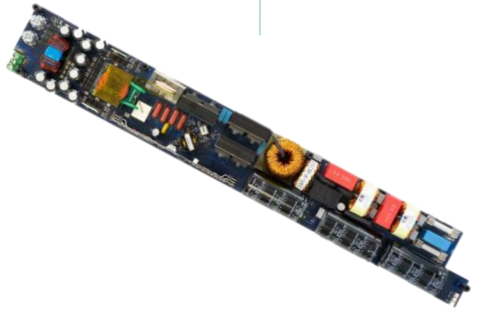
50-60 USD

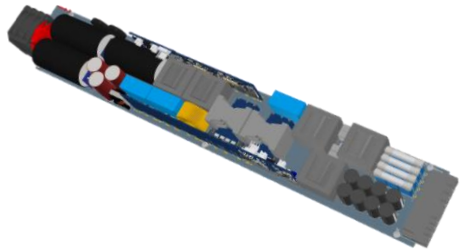
Motherboard

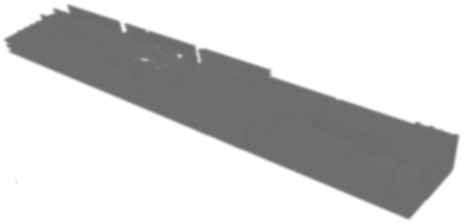
USD = potential Infineon content per AI server

For AC/DC, Infineon is addressing the growing power demand of AI and data centers with PSU solutions ranging from 3 kW – 12 kW

3 kW	3.3 kW	8 kW	12 kW
η 97,5%	η 97,5 %	η ~97,5%	η ~97,5%
32 W/in³	**95 W/in³**	**100 W/in³**	**100 W/in³**
Available now	Available now	Available in Q1/25	Coming soon







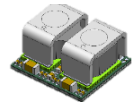
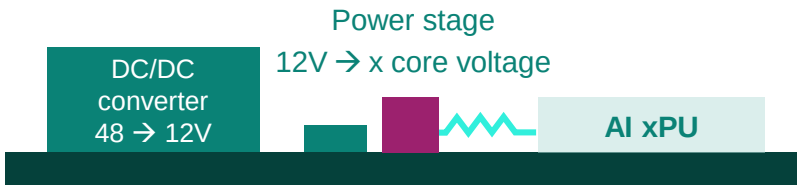
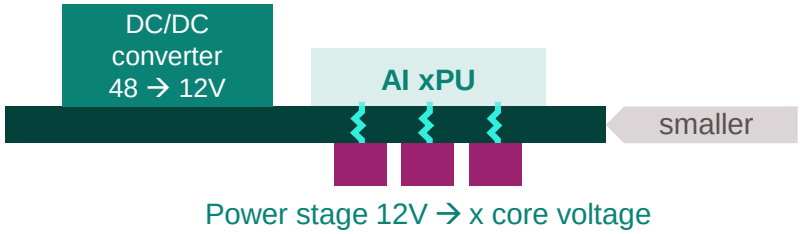
Si SiC

Si SiC GaN

Si SiC GaN

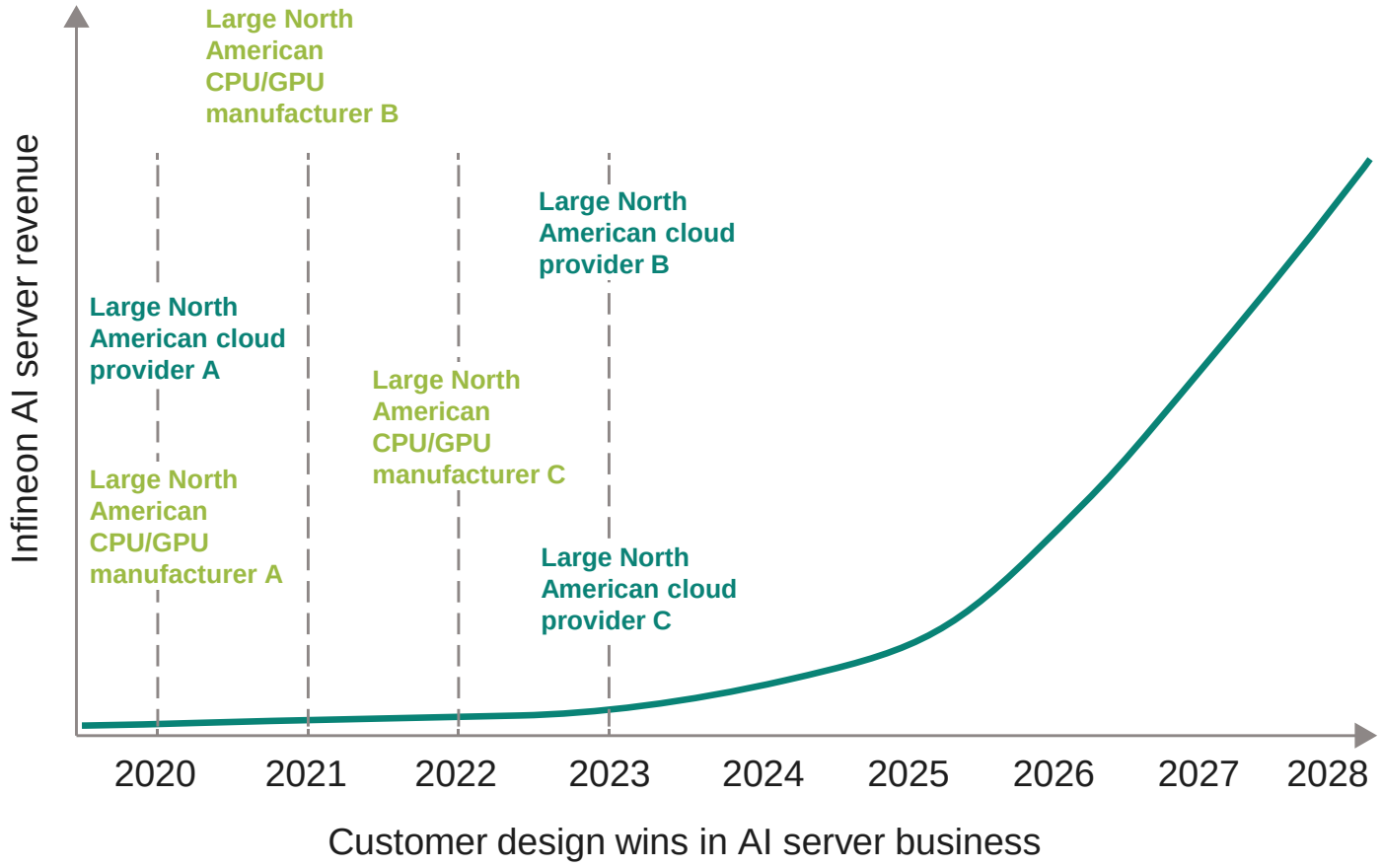
Si SiC GaN

Best-in-class energy efficiency, power density and TCO through Infineon's Dual-phase power modules and backside mounting

Power delivery network	Power design	
	 **Discrete solution** Equivalent discrete solution	 **Module solution** Infineon's dual-phase modules with inductor-on-top design
10% of input power loss[1]		
Lateral mounting 	**Standard discrete solution** – No additional energy savings	**Dual-phase module with inductor-on-top design** – **2%** efficiency savings[3] – and up to **30%** more powerful processor[4]
< 2% of input power loss[2]		
Vertical mounting 	***not applicable***	**Dual-phase module with inductor-on-top design** – additional **2%** efficiency savings[3] – and up to **30%** more powerful processor[4] **Only Infineon combination offering best-in-class energy efficiency, power density & TCO**

1 In motherboard interconnections through lateral mounting
2 In motherboard interconnections through vertical mounting
3 Using Infineon's dual-phase modules with an inductor-on-top design compared to an equivalent module solution
4 Can be supplied within the same area through an up to 30% reduction of the occupation area enabling a current density increase

AI will be a strong driver of revenue increase for Infineon's server business



In FY24 AI revenue
in our server business is
expected to be a
low triple digit million amount

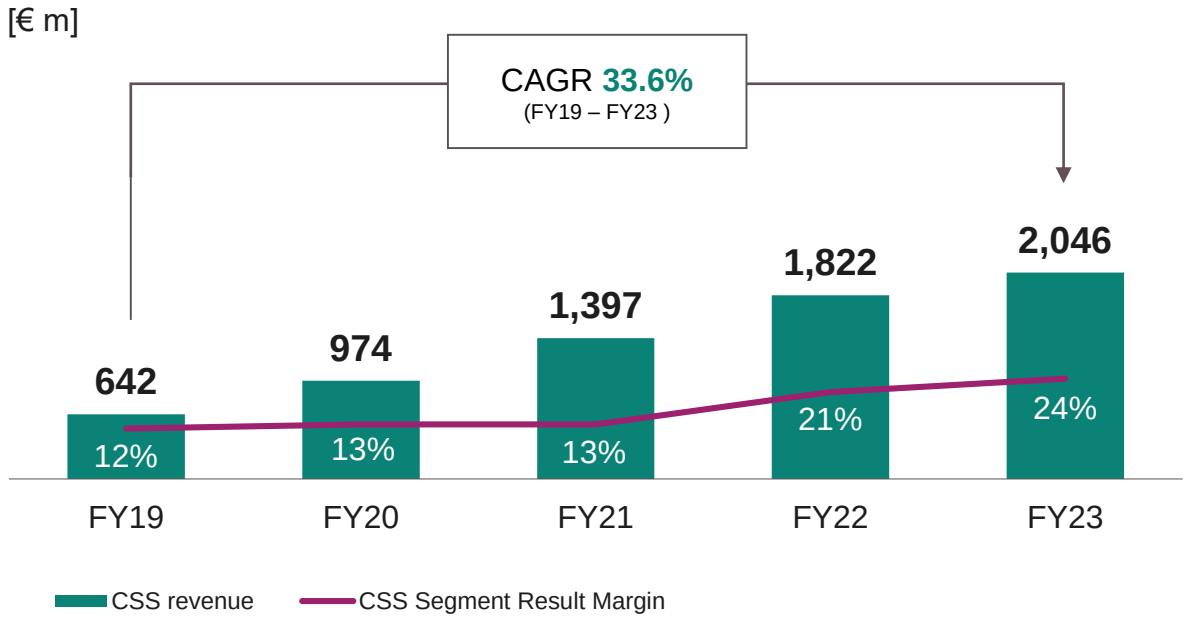
Revenue CAGR
FY24-29

> 50%

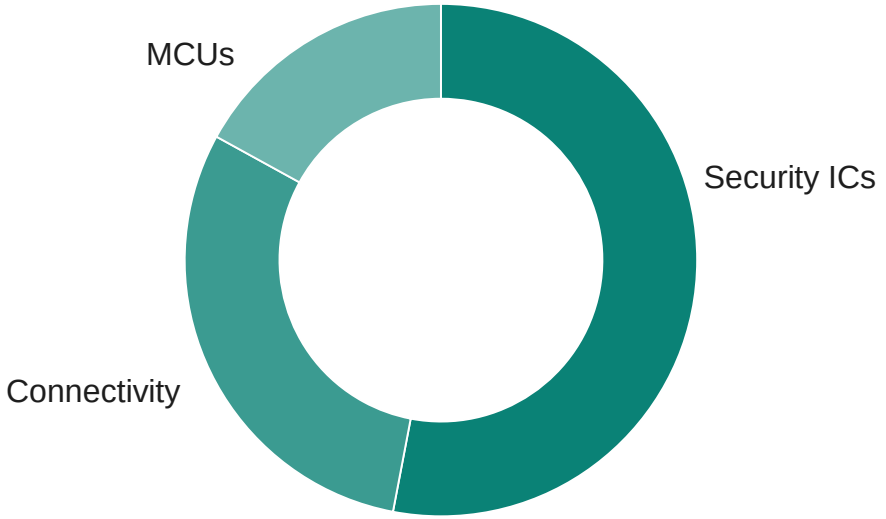
Connected Secure Systems

CSS at a glance

CSS revenue and Segment Result Margin



FY23 revenue split by product group



Key customers

amazon, arlo, cpi card group, fitbit, GPO, Haier, HARMAN, hp, IDEMIA, Midea, PERFECT Plastic, Raspberry Pi, SAMSUNG, SONY, THALES

Market demand remains weak across consumer segments influenced by high inventories and continuing macro economic risks

Applications
% of FY23 segment revenue

~63%
Industrial and Consumer IoT

- Industrial IoT
- Home Appliances
- Smart Home
- Health & Lifestyle
- Media, Game & Compute
- Automotive

~37%
Smart cards

- Payment
- Identification

Market outlook for CY24

→	– Continued macro economic risks limit growth, while trends of Industry 4.0 and Industrial IoT remain
→	– Although penetration of smart appliances increases, potential deterioration of consumer sentiment limits growth
→	– Stabilization of macroeconomic environment expected to trigger slight growth in the smart home segments, while risks related to consumer spending prevail
→	– Stabilization of macroeconomic environment could support growth in devices like smartwatches, while risks related to consumer spending prevail
→	– Main consumer markets are projected to recover later in FY24 as the macroeconomic environment and consumer sentiment improve; however no sharp rebound expected
→	– Automotive market is slightly slowing down after better-than-projected development in 2023 due to persisting macroeconomic risks
↘	– For the short-term outlook shipment declines are expected due to channel inventory digestion from high stock levels across the value chain
→	– Stabilization of market growth after post-Covid peak in ePassports, while demand remains high

CSS offers a compelling product portfolio and roadmap for IoT

Microcontrollers (PSoC™ and XMC™)

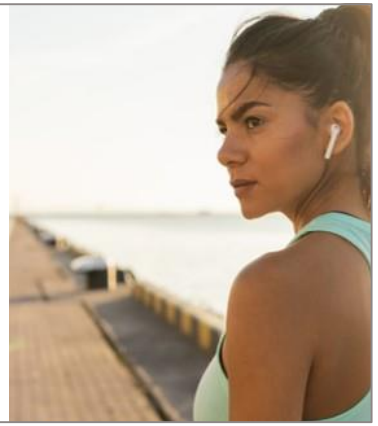
- PSoC™ family for general purpose, XMC™ family for industrial
- Strength in low power, high performance, and capacitive touch sensing
- Compelling roadmap focused on AI, security, and integrated connectivity

AIROC™ Wi-Fi and Combos

- Wi-Fi standalone and Wi-Fi & Bluetooth® Combo chips for end devices
- Focus on innovation for IoT applications: reliability and power
- Strong leader for battery-operated Wi-Fi
- Recent new product introduced Wi-Fi 6 & 6E – the first IoT-focused product in the brand new 6 GHz band

AIROC™ Bluetooth®

- Portfolio of standalone and PSoC™-integrated Bluetooth® and Bluetooth® Low Energy products
- Strong position in wearables, gaming, remote controls, HID, and automotive
- Introducing new products to support the newest smart-home industry standard: Matter

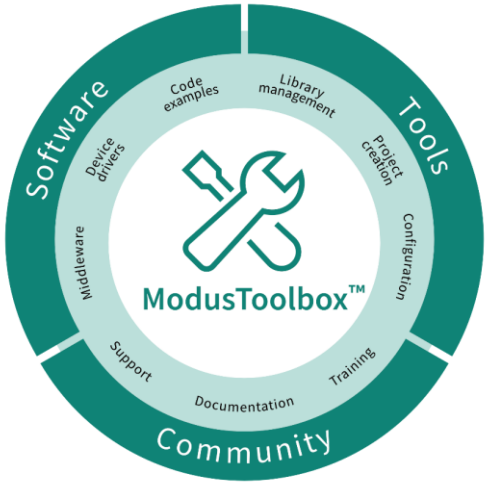


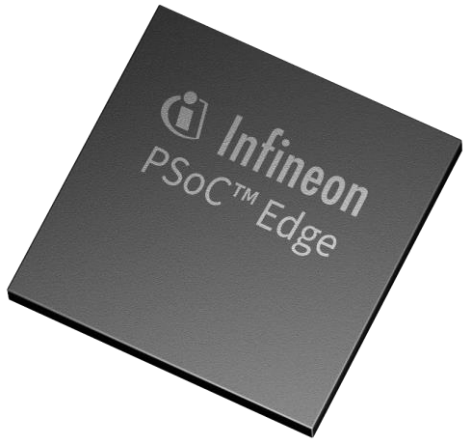
ModusToolbox™ and Software

- ModusToolbox™ is a rich embedded software development toolset to accelerate and simplify development for Infineon MCUs, and the core development platform for Infineon software
- Strong set of SW features in MCU and connectivity SDK's
- CIRRENT™ is a cloud services platform for data-driven improvement of connectivity and delivery of innovative IoT services

Customized Machine Learning on PSOC™ Edge with Imagimob Studio and ModusToolbox™

With the seamless integration of **Imagimob Studio** and **ModusToolbox™** companies can build and deploy robust machine learning models. When paired with **PSOC™ Edge**, companies can optimize power consumption and improve efficiency while adding intelligence to products.





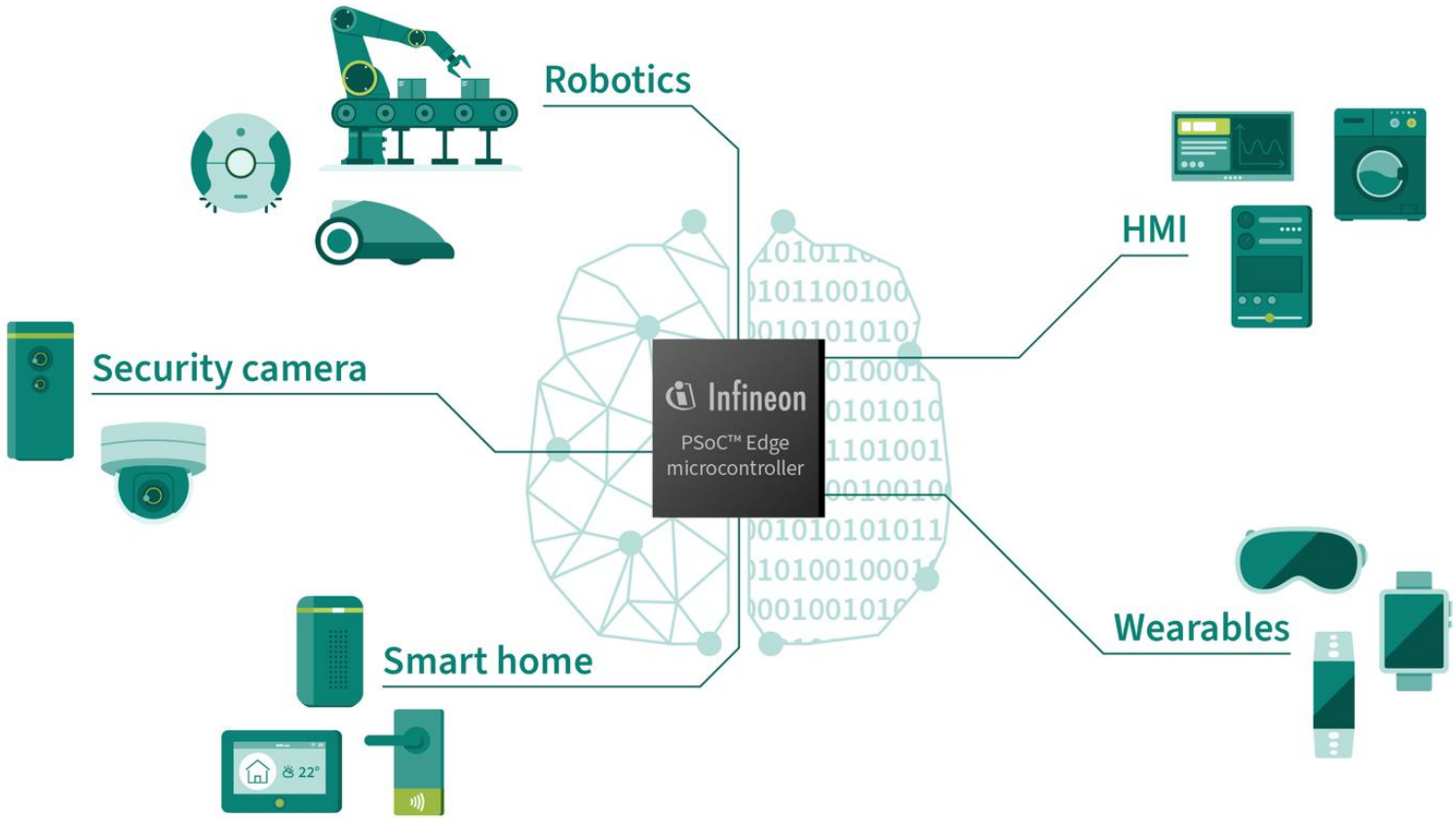
Imagimob Studio, Infineon's platform for machine learning development, makes it easier to create Edge AI models

ModusToolbox™ Software is a modern, extensible development ecosystem

PSOC™ Edge is the next generation Machine Learning-enhanced sensing, low power, secured, and advanced HMI high-performance microcontroller

Next-generation PSOC™ Edge portfolio: Infineon PSOC™ Edge E81, E83 and E84 microcontroller families

PSOC™ Edge – Enables a new generation of responsive machine learning devices



Fully integrated system-on-chip (SoC) devices supported with **comprehensive system design tools and software**.

Based on the **high-performance** Arm® **Cortex®-M55** with an embedded **ultra low power technology.**

Robust **security with on-chip**, hardware-isolated **secured enclave**

Out-of-the-box **Machine learning enablement**

Quickly move from concept to product enabling **fast time-to-market** for IoT and consumer applications.

Financial synergy success marked by our journey to becoming a leading IoT solution provider

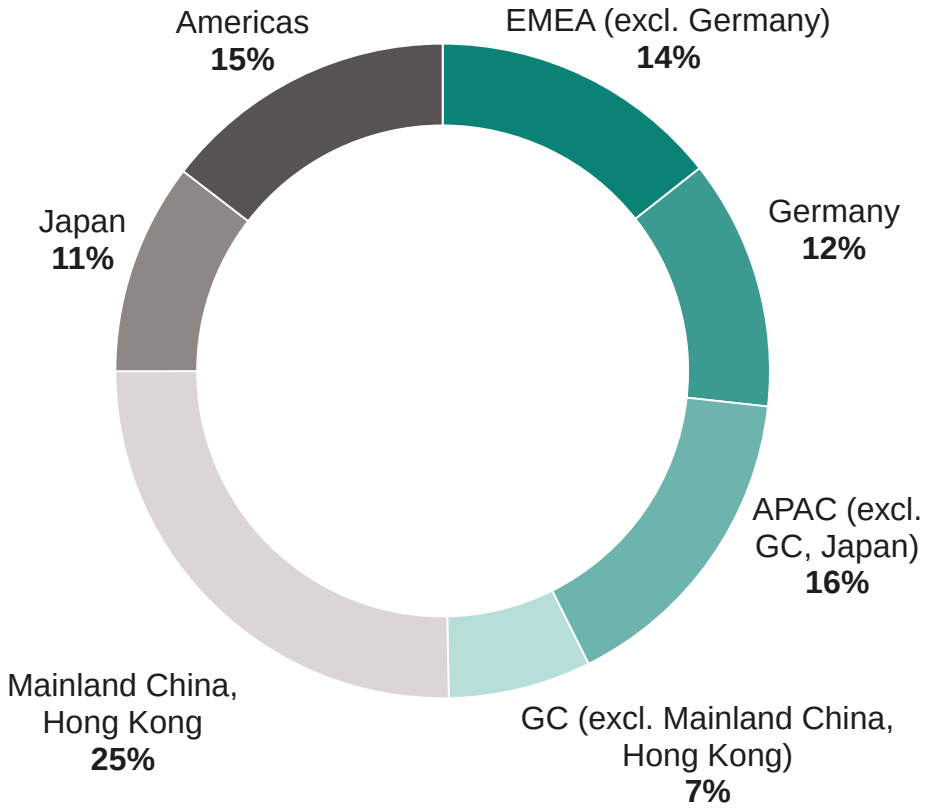
STEP 1	STEP 2	STEP 3	STEP 4
Product Sell	**Synergy Sell**	**System Sell**	**Solution Sell**
Products: **Sensors** **Power**	**Products:** **Sensors** **Power** **MCU**	**Products:** **Wireless and MCU** **Hardware Security** **Power** **Memory** **Radar** **3D ToF** **NFC Energy Harvesting**	**Additional offering:** **Performance** Advanced sensing algorithms **Integration** Highly integrated system **AI / ML** First stage motion discrimination, acoustic event detection **Services**
IFX content per unit: **Up to €2**	**IFX content per unit:** **Up to €3.5**	**IFX content per unit:** **Up to €10**	**IFX content per unit:** **> €10**

2021 → 2022 → 2023 → 2024+

Selected financial figures

Strong presence in all regions; well-balanced customer portfolio; no customer represents more than 10% of total sales

FY23 revenue by region



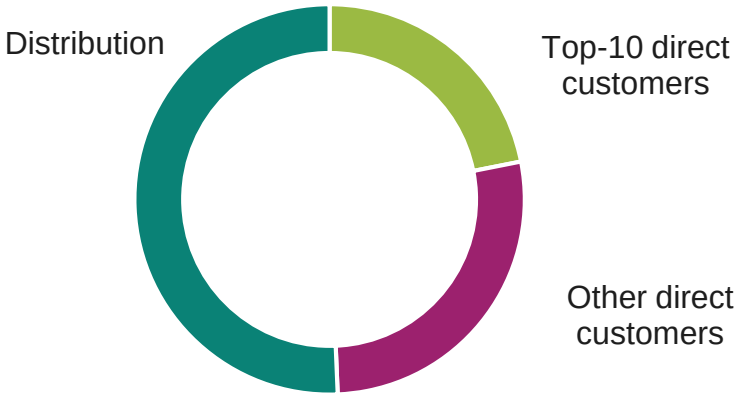
Revenue by sales channel

Distribution partners[1]

Arrow, Avnet, Future Electronics, Intron, Jingchuan, Macnica, Marubun, Nexty Electronics, Weikeng, WPG

Top-10 direct customers[1]

Aptiv, Bosch, Continental, Delta, Denso, Hyundai Motor Group, Siemens, Valeo, Vitesco Technologies, ZF



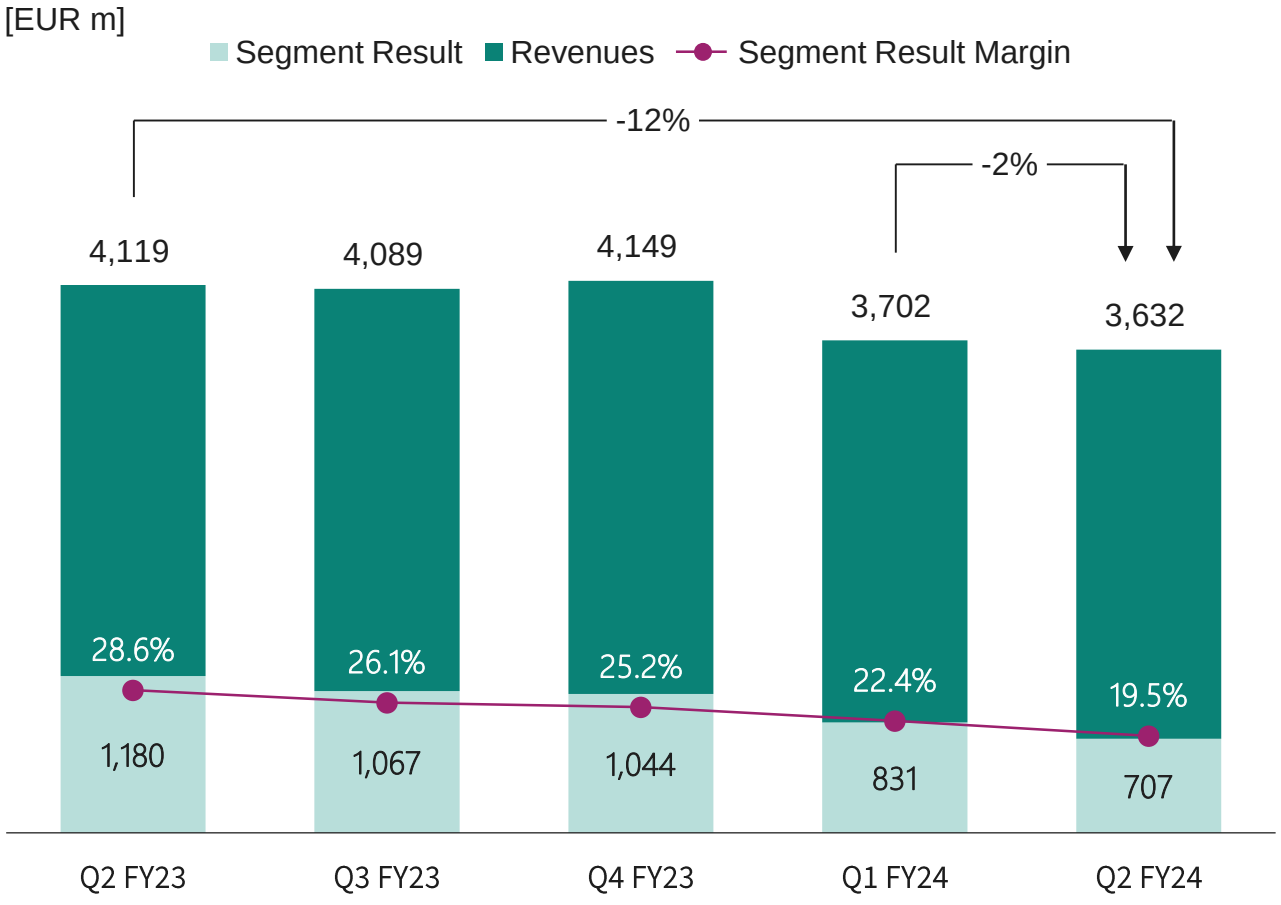
EMS partners[1]

Flex, Jabil

1 In alphabetical order

Group financial performance

Revenues and Segment Result

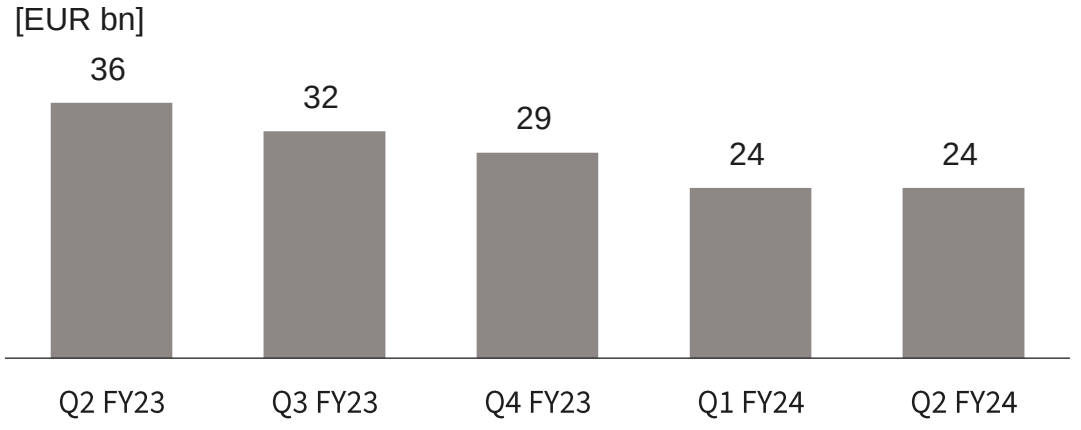


USD exchange rate

Average revenue exchange rate

	Q2 FY23	Q1 FY24	Q2 FY24
ø USD/EUR	1.08	1.08	1.09

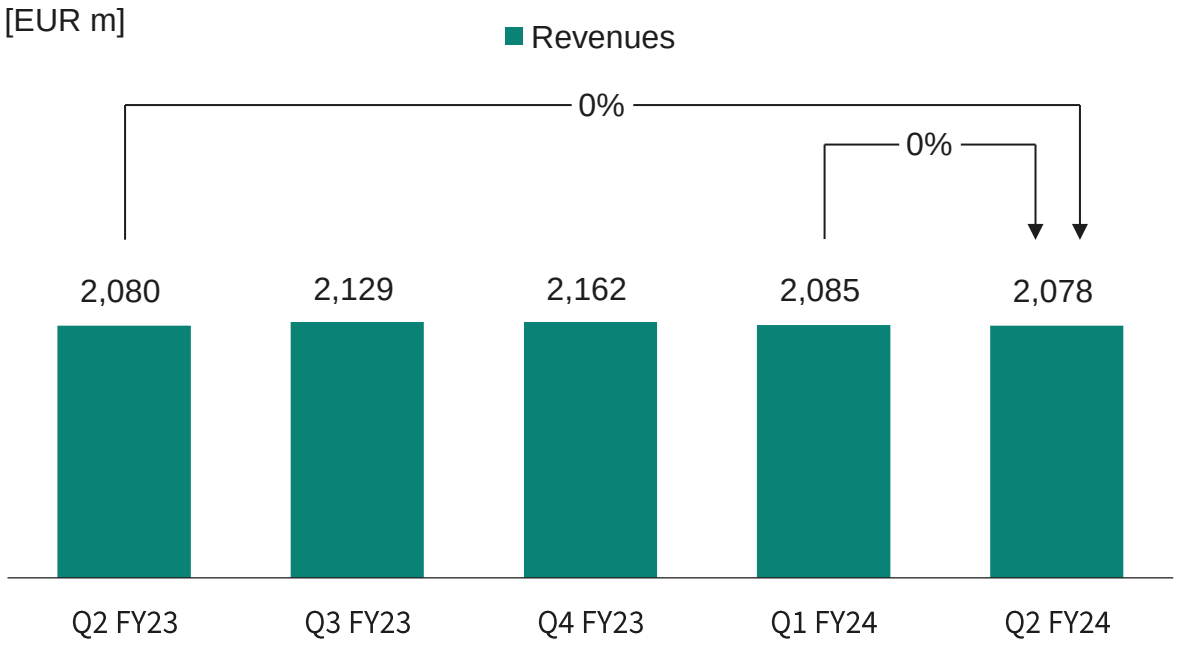
Order backlog[1]



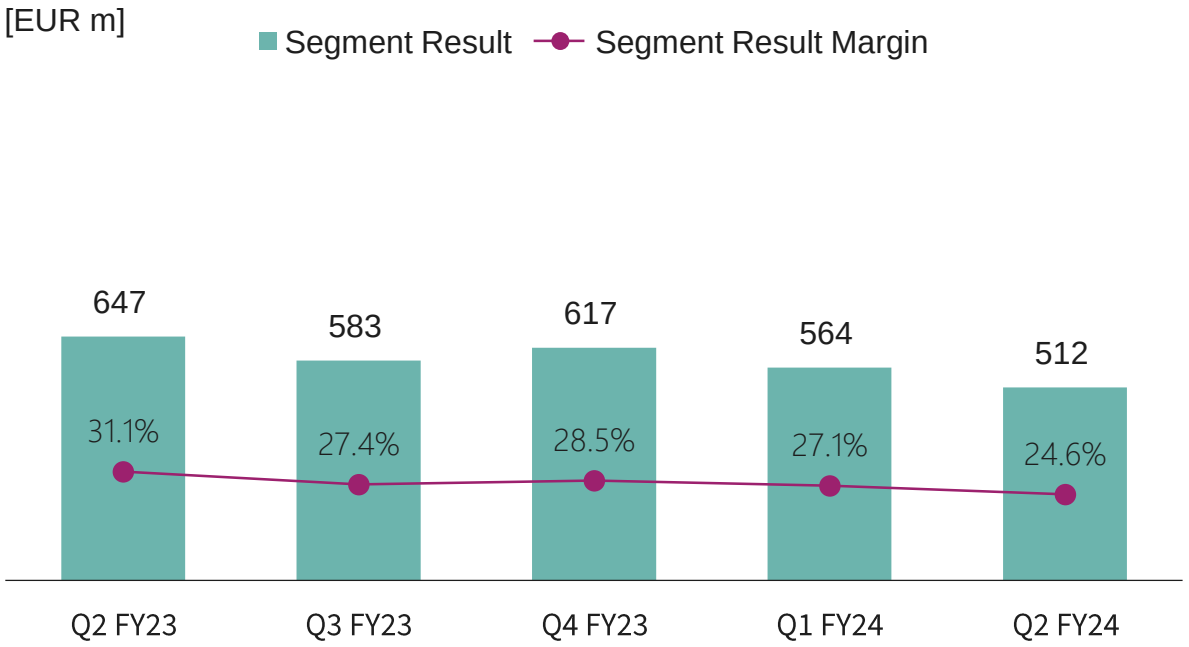
[1] See notes for definition

Automotive (ATV)

Revenues



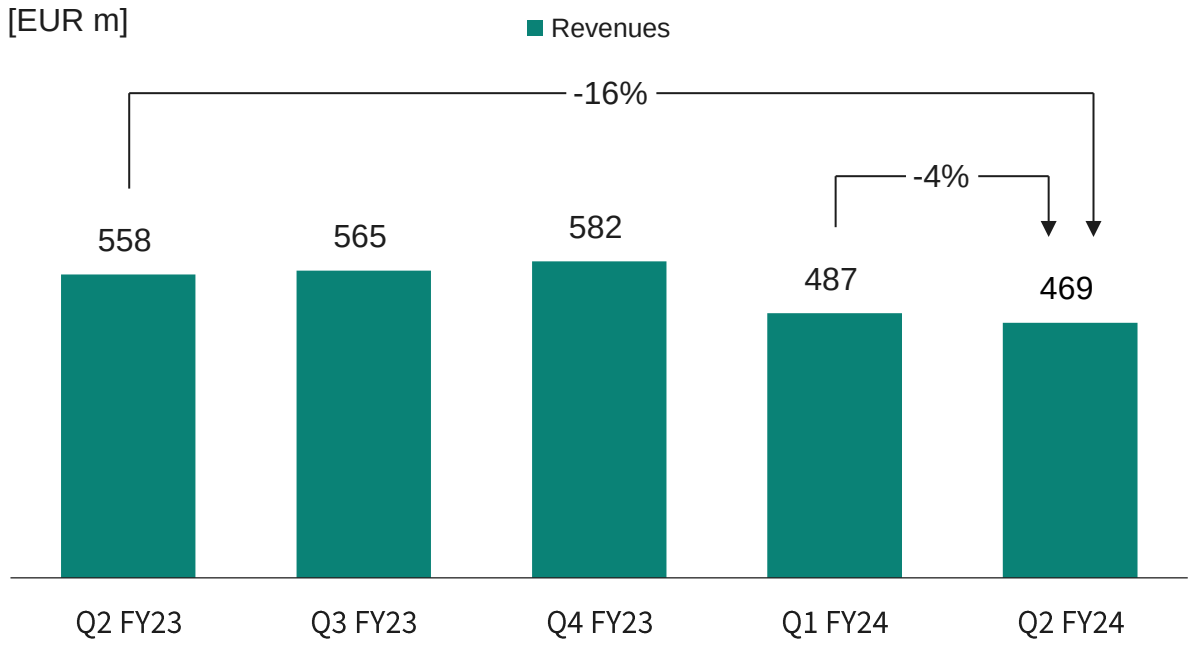
Segment Result



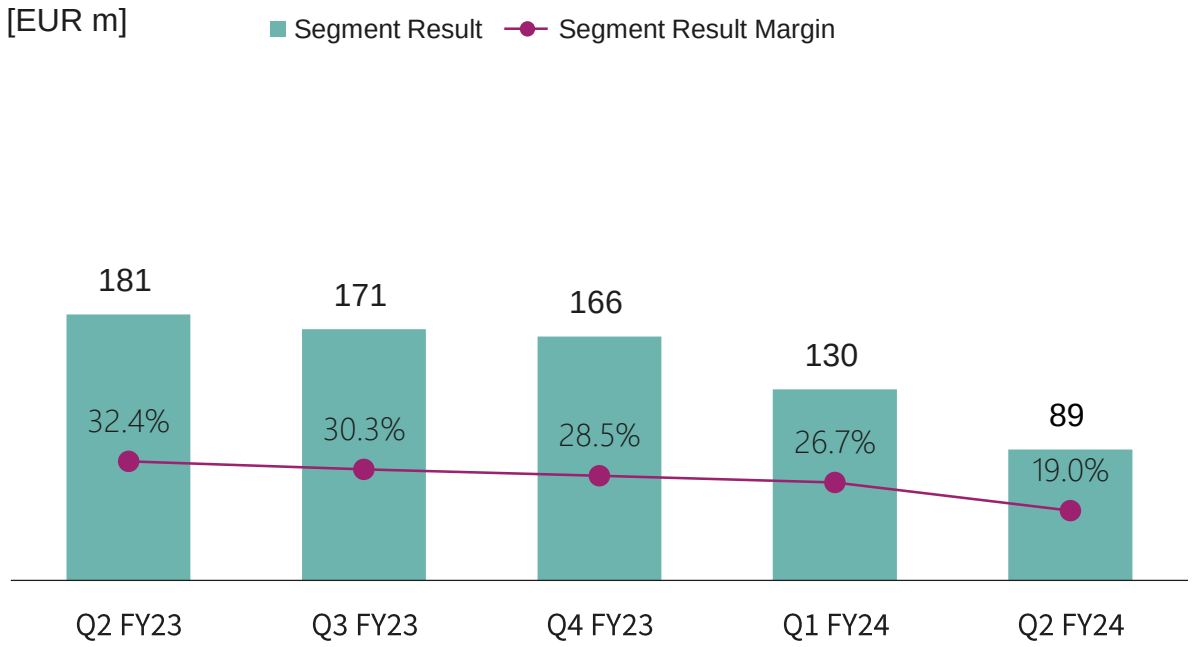
- Stable revenue development – moderate inventory correction, and annual price declines compensated by structural drivers and volume gains
- In 2023, Infineon expanded its global leadership in automotive semiconductors, including the number one position in MCUs
- For FY24, Infineon expects revenue growth by a low to mid-single digit percentage, despite adverse market conditions (EV growth slowing; modest inventory digestion), with an anticipated SR at the lower end of the aforementioned range of between 25 and 28 percent.

Green Industrial Power (GIP)

Revenues



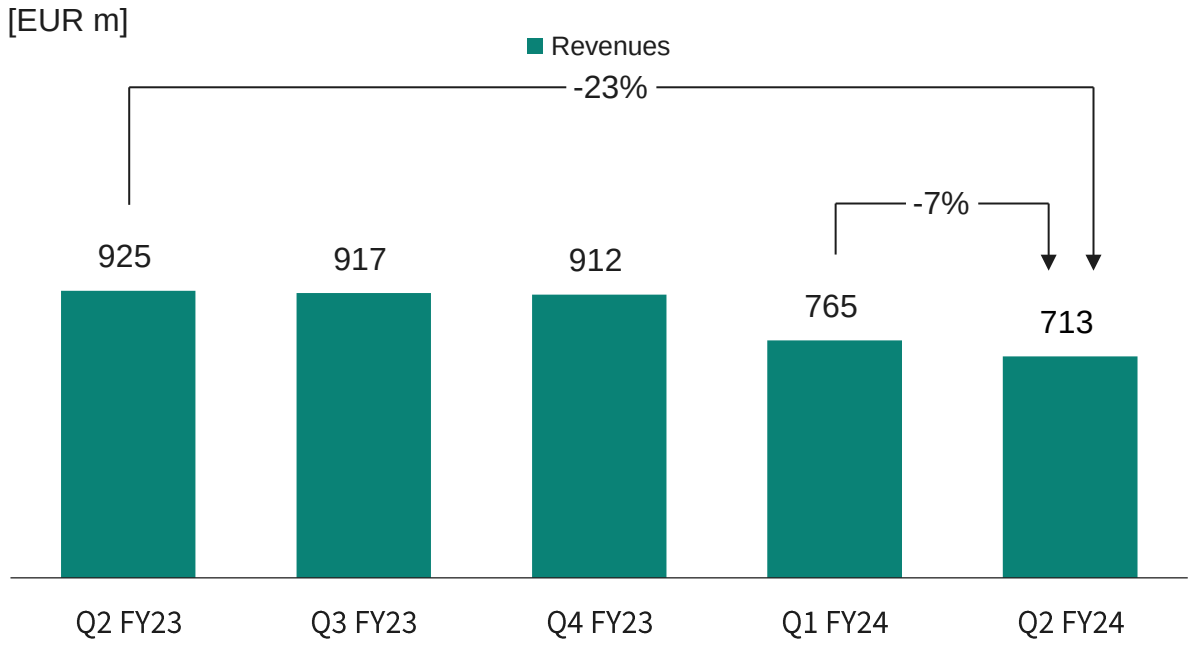
Segment Result



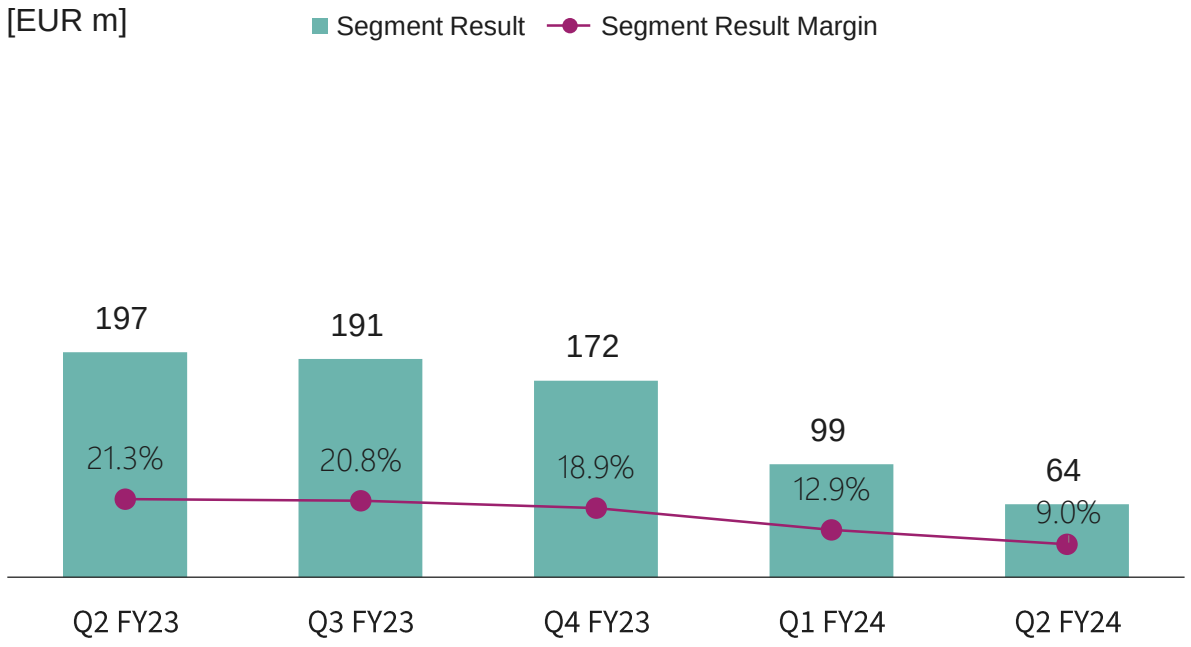
- Challenging business environment for industrial applications
- Weak corporate investing and low consumer confidence result in low demand for industrial drives and home appliances
- Robust underlying demand for decarbonization-related applications, but dampening impact of high inventory levels persisting

Power & Sensor Systems (PSS)

Revenues



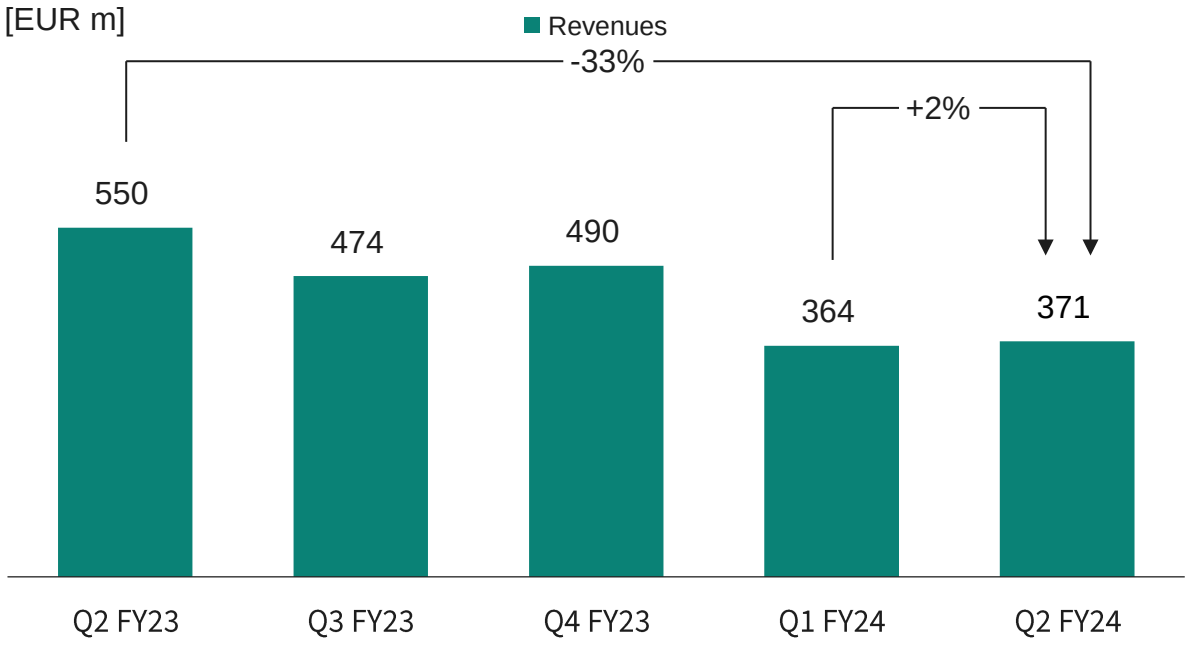
Segment Result



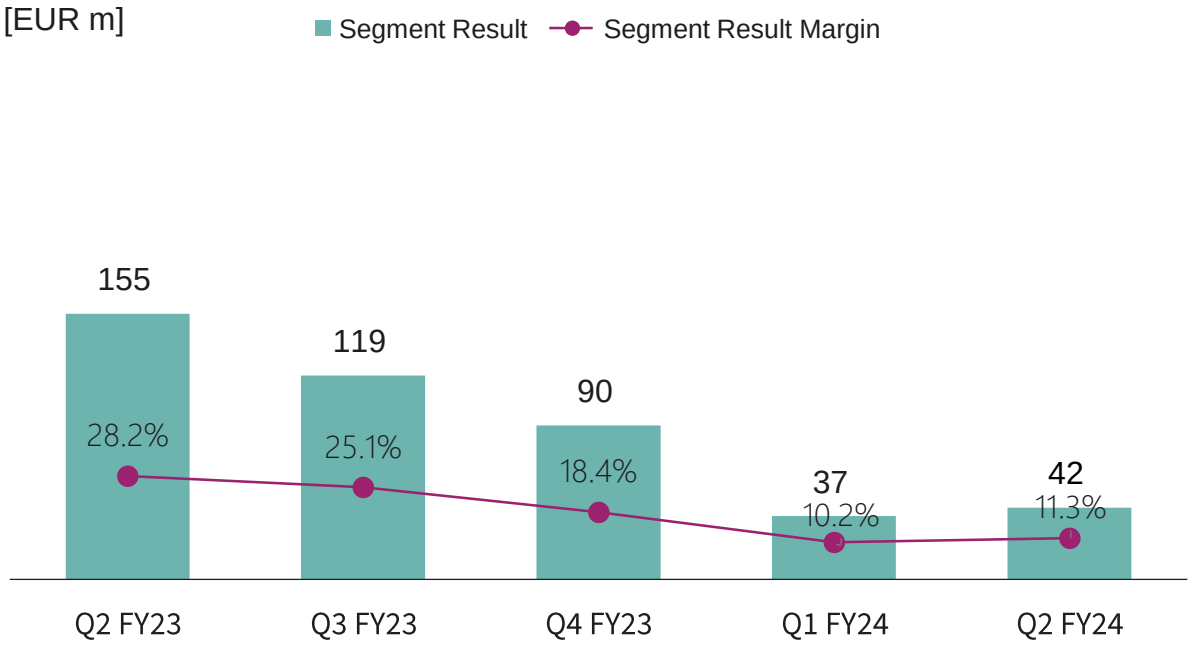
- MOSFETs and ICs for consumer-facing applications remained weak; revenue uptick in servers and smartphones
- Following six quarters of sequential decline, indicators point to March quarter being the trough
- Mid-term growth prospects remain promising – notably driven by Infineon's leading AI power management solutions

Connected Secure Systems (CSS)

Revenues



Segment Result

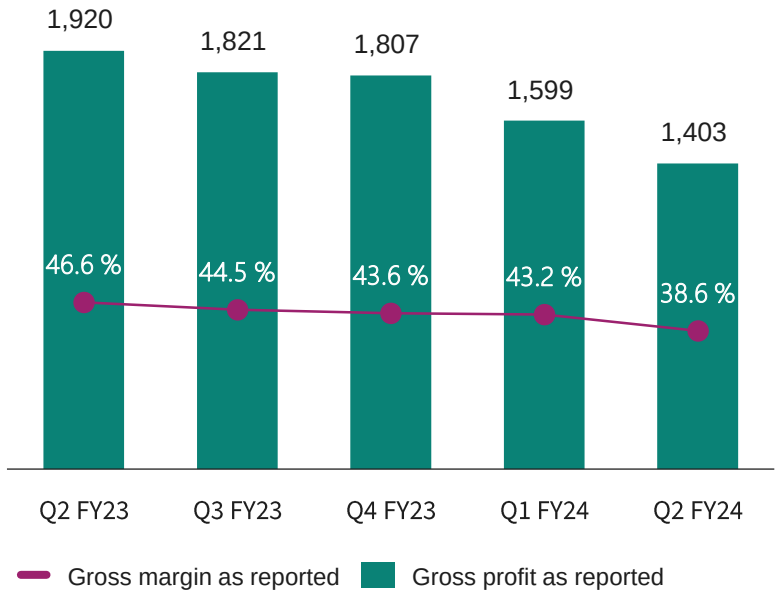


- Stabilizing demand for consumer IoT and smart card products drove bottoming revenue
- Pace of inventory correction slowing, some restocking by distributors in Wi-Fi
- Moderate demand recovery expected in the second half of CY24

Gross margin and Opex

Gross profit

[EUR m]



Therein Non-Segment Result charges
[EUR m]

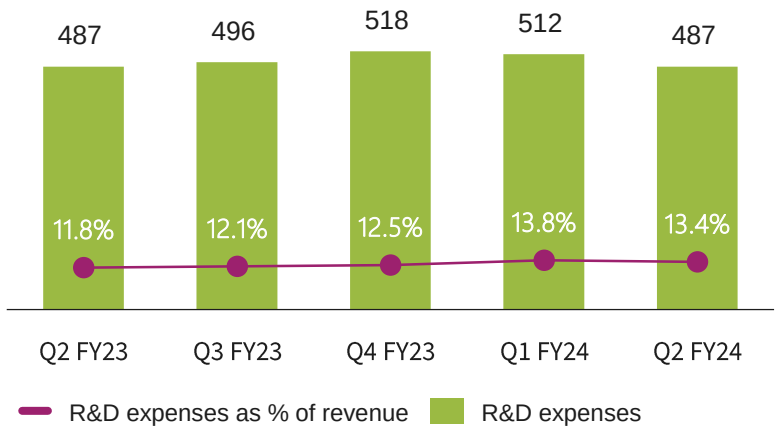
81	67	79	65	91

Adjusted gross margin

48.6%	46.2%	45.5%	44.9%	41.1%

R&D

[EUR m]

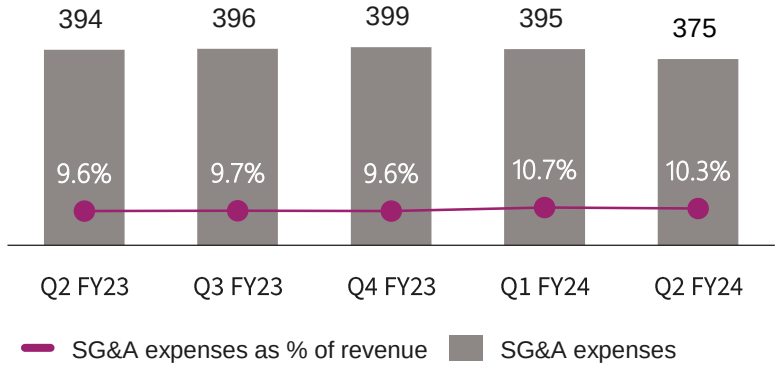


Therein Non-Segment Result charges
[EUR m]

8	12	12	16	18

SG&A

[EUR m]



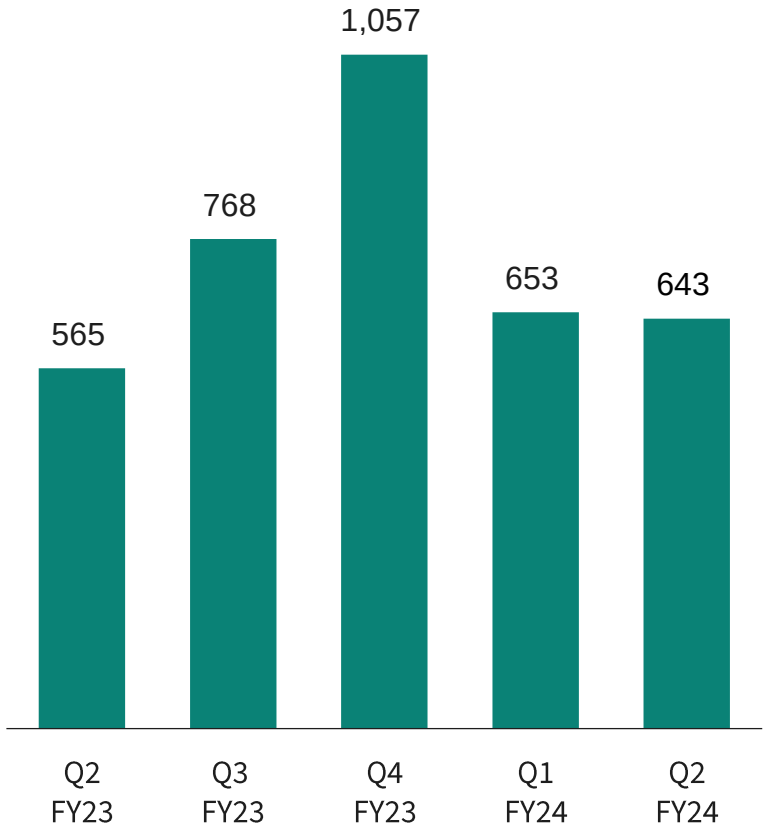
Therein Non-Segment Result charges
[EUR m]

54	55	57	54	54

Investments, Depreciation & Amortization and Free Cash Flow

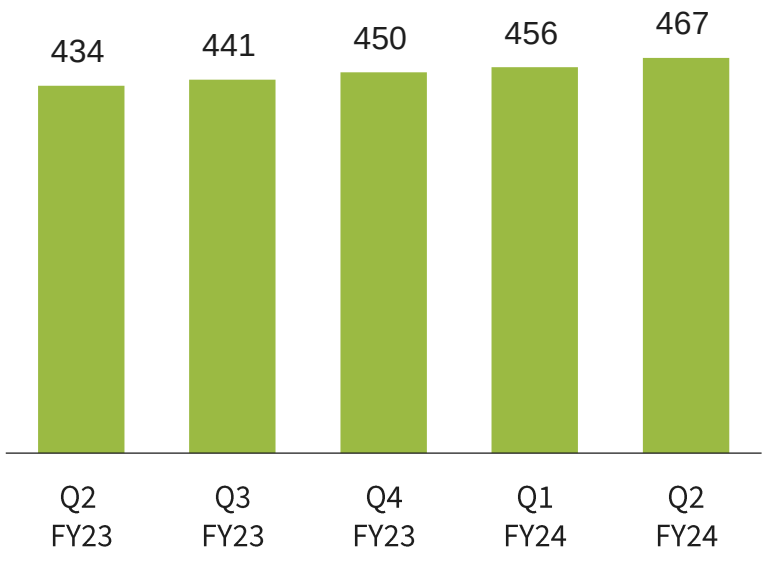
Investments

[EUR m]



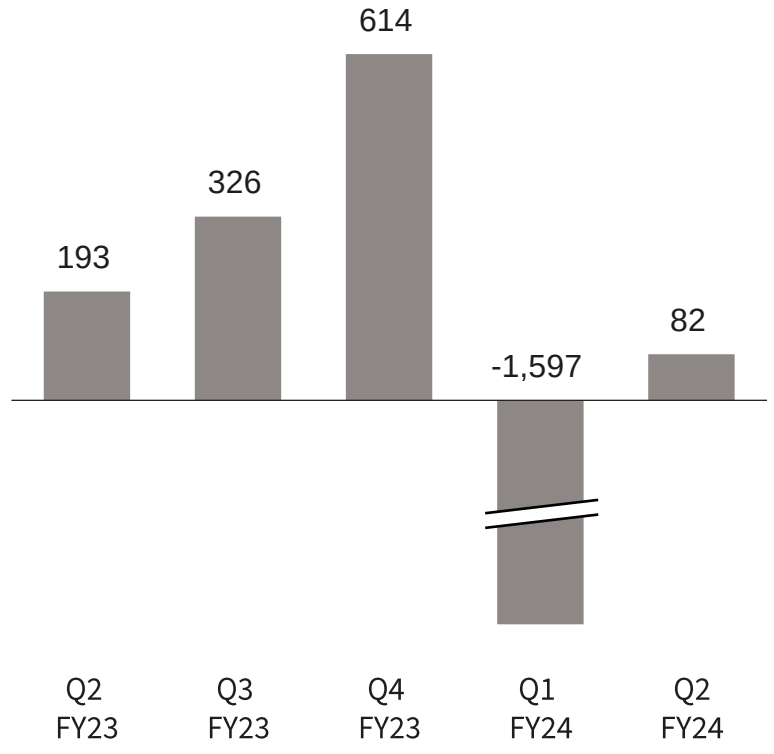
Depreciation & Amortization

[EUR m]



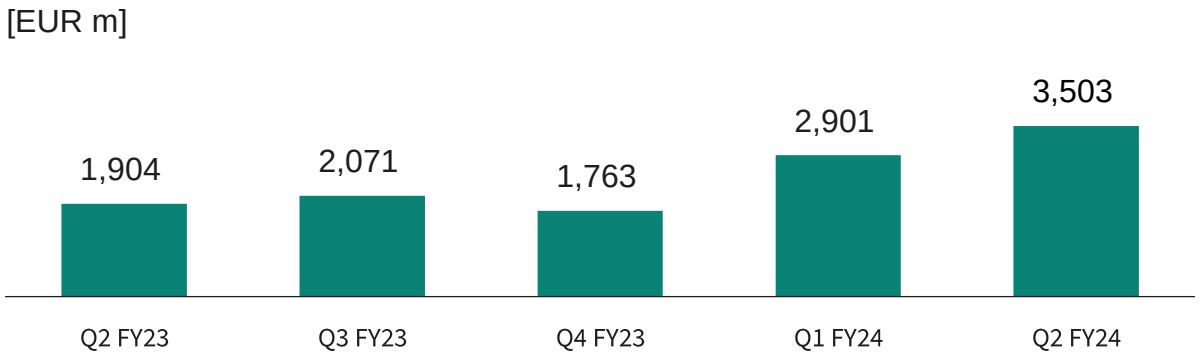
Free Cash Flow

[EUR m]

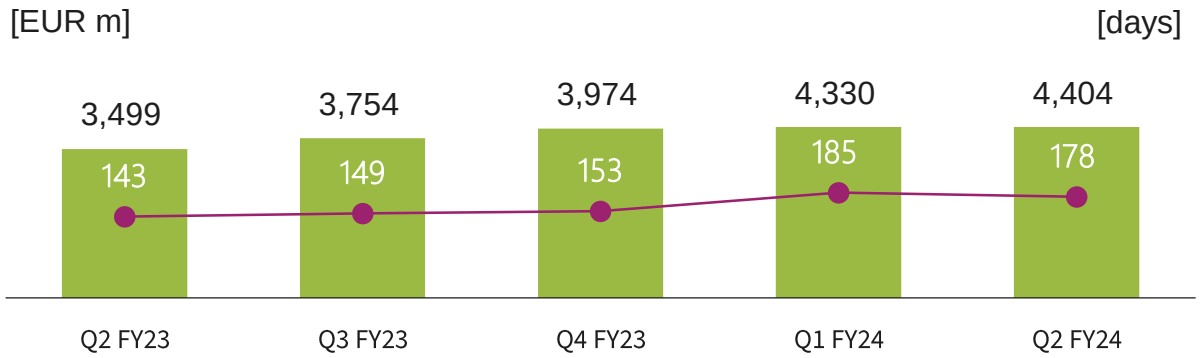


Working capital, in particular trade working capital components

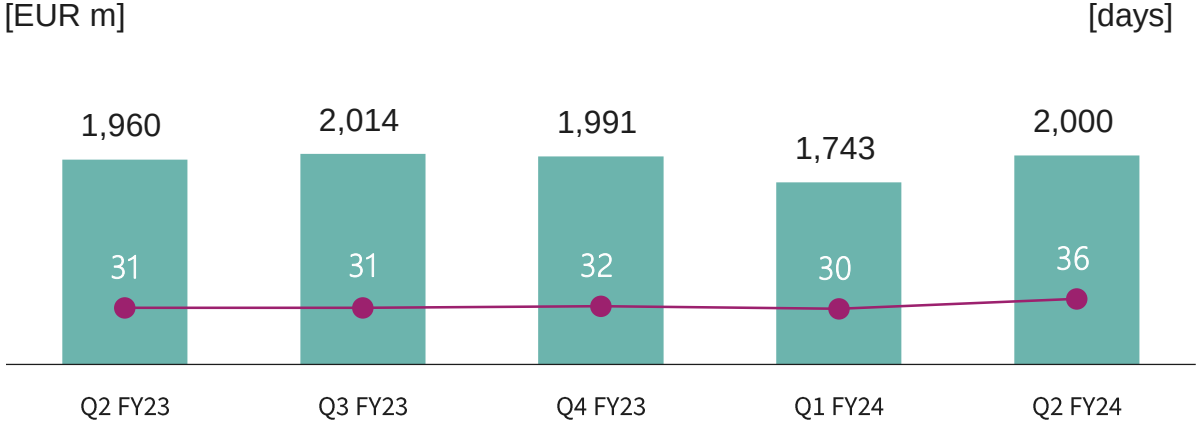
Working capital[1]



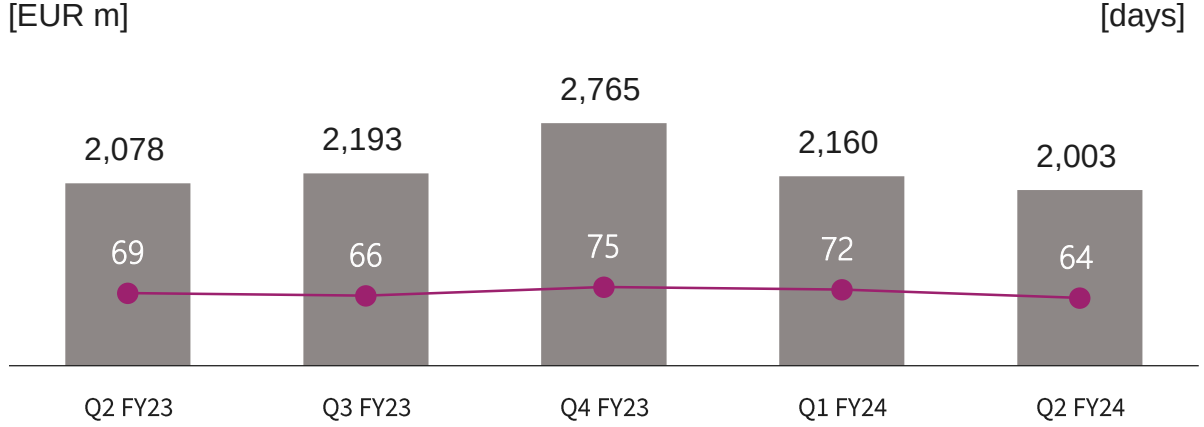
Inventories



Trade receivables



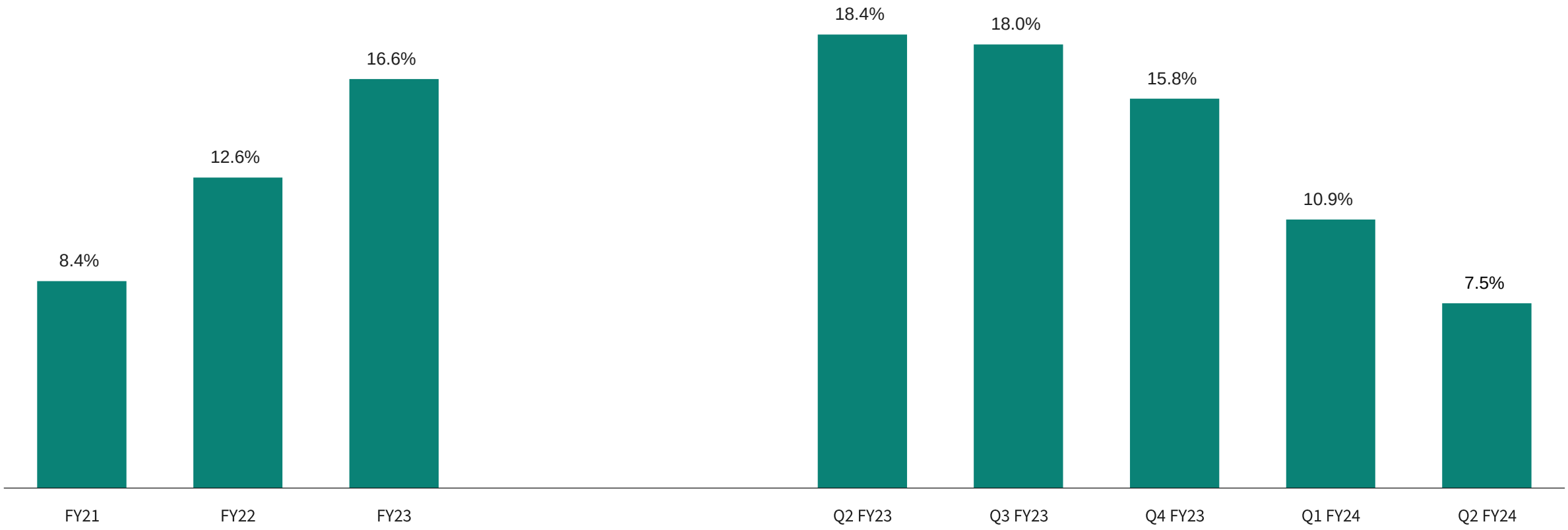
Trade payables



[1] See notes for definition

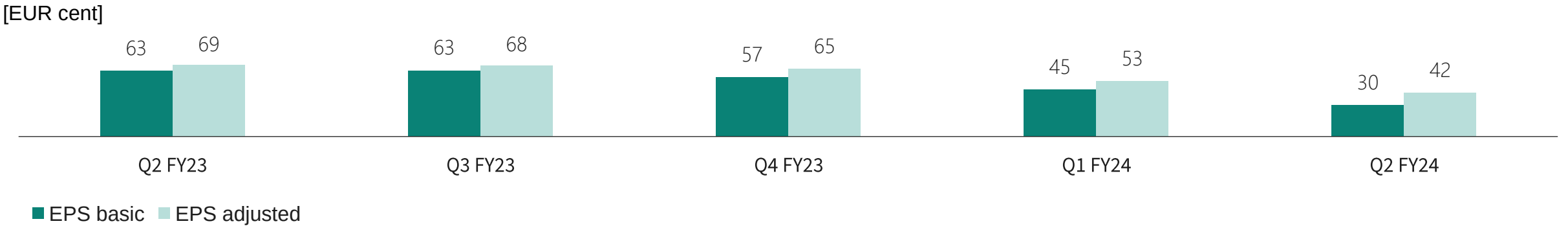
Return on capital employed

Historical development

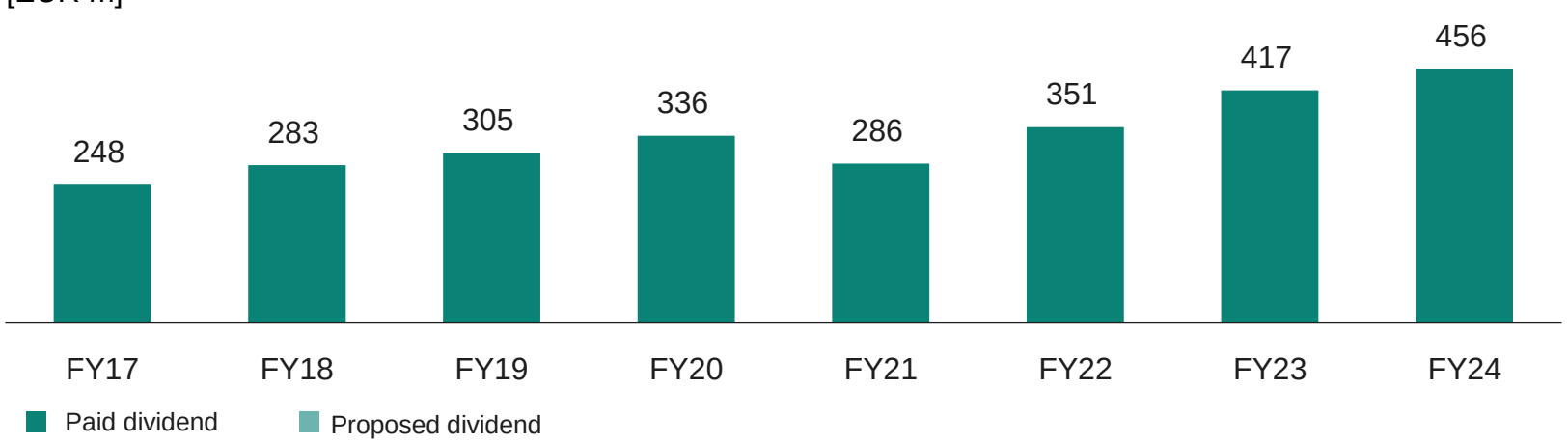


Earnings-per-share and total cash return

Development of earnings-per-share (EPS) from continuing operations



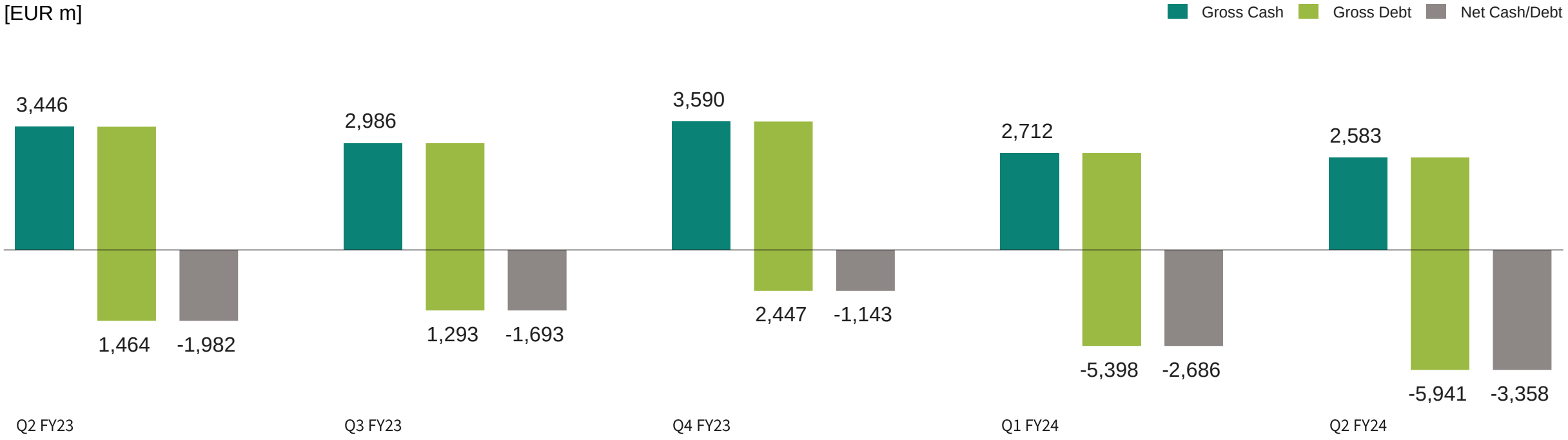
Total cash return to shareholders via dividends



- Dividend for FY24: €0.35 per share
- Dividend payout of €456m for FY24

Development of liquidity and debt

Capital structure



Dividend payout: - 456 EUR m

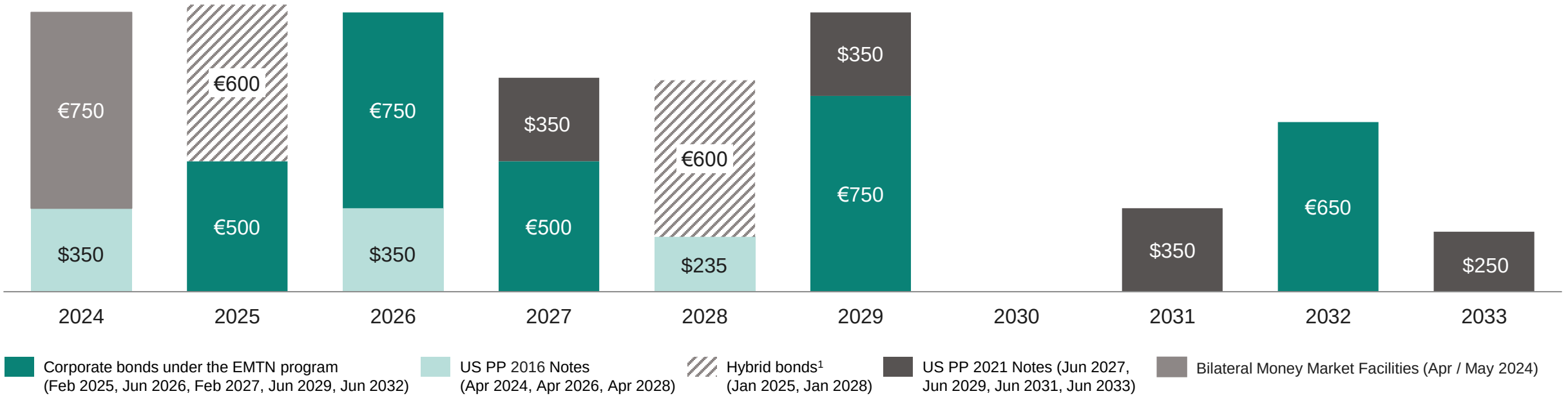
Share buyback: - 233 EUR m

Eurobond: + 500 EUR m

Maturity profile

Calendar years 2024 to 2033

[EUR m; USD m; nominal values]



[1] On 1 Oct 2019, Infineon issued a perpetual hybrid bond with two tranches: €600m with first call date in 2025 and €600m with first call date in 2028; both are accounted as equity under IFRS.

Conservative financial policy and strict commitment to investment-grade rating are the basis for through-cycle flexibility

	Financial Policy Targets	Status Quo (LTM 31 March 2024)
Gross Cash[1]	€1bn + at least 10% of revenues → **€2.6bn**	€1bn + 13% of revenues → **€2.6bn**
Gross Debt[2]	**≤ 2.0x** EBITDA	**1.2x** EBITDA

Comfortable liquidity position	– Flexibility for financing operating activities and investments through the cycle – Cushion for net pension liabilities and contingent liabilities
Balanced debt position	– Gross debt target commensurate with investment-grade rating – Successful de-leveraging offers ample headroom

Rating	Investment grade	**BBB+** stable outlook (by S&P Global Ratings)

[1] Gross cash position is defined as cash and cash equivalents plus financial investments | [2] Gross debt is defined as short-term debt and current maturities of long-term debt plus long-term debt. EBITDA is calculated as the total of earnings from continued operations before interest and taxes plus scheduled depreciation and amortization


Infineon

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Disclaimer

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Glossary

AC	alternating current
ACC	adaptive cruise control
AD	automated driving
ADAS	advanced driver assistance system
AEB	autonomous emergency braking
AI	artificial intelligence
AR/VR	augemented/virtual reality
BEV	battery electric vehicle
BLE	bluetooth low energy
BMS	battery management system
BoM	bill of materials
CAV	commercial, construction and agricultural vehicles
CMOS	complementary metal-oxide-semiconductor
DC	direct current
DSC/SSC	double/single sided cooling
E/E	electrical/electronic architecture
ECU	electronical control unit
eSE	embedded secure module
eSIM	embedded subscriber identity module
EMS	electronics manufacturing service
ESS	energy storage system
EV	electric vehicle
FCEV	full cell electric vehicle
FHEV/MHEV	full/mild hybrid electric vehicle
FoM	figure of merit
F-RAM	ferroelectric memory
GaN	gallium nitride
HEMT	high-electron-mobility transistor
HID	human interface device
HMI	human machine interaction
HV	high voltage
HVAC	heating, ventilation, air conditioning
IC	integrated circuit
ICE	internal combustion engine
IGBT	insulated gate bipolar transistor
IoT	internet of things
IPM	intelligent power module
LED	light-emitting diode
MCU	microcontroller uni
MEMS	micro electro-machanical systems
MHA	major home appliances
MIMO	multiple input, multiple output
ML	machine learning
MNO	mobile network operator
MOSFET	metal-oxide silicon field-effect transistor
MV	medium voltage
NFC	near-field communication
OBC	on-board charger
OEM	original equipment manufacturer
P2S	Infineon's strategic product-to-system approach
PD	power delivery
PHEV	plug-in hybrid electric vehicle
PMIC	power management integrated circuits
PoL	point of load
PSoC	programmable system-on-chip
PUE	power usage effectiveness
PV	photovoltaic
RAM	random access memory
RF	radio frequency
SAE	Society of Automotive Engineers
SDK	software development kit
Si	silicon
SiC	silicon carbide
SNR	signal-to-noise ratio
SoC	system-on-chip / state of charge
ToF	time-of-flight
UWB	ultra-wideband
WBG	wide-band gap, specifically referring to SiC and GaN based devices

Notes and ESG footnotes

Investments =	'Purchase of property, plant and equipment' + 'Purchase of intangible assets and other assets' incl. capitalization of R&D expenses
Capital Employed =	'Total assets' – 'Cash and cash equivalents' – 'Financial investments' – 'Assets classified as held for sale – ('Total Current liabilities' – 'Short-term debt and current maturities of long-term debt' – 'Liabilities classified as held for sale')
RoCE =	Operating profit from continuing operations after tax/Capital Employed = (‘Operating profit' – ‘Financial result excluding interest result' – 'Share of profit (loss) of associates and joint ventures accounted for using the equity method'-'Income tax')/Capital Employed
Working Capital =	('Total current assets' – 'Cash and cash equivalents' – 'Financial investment' – 'Assets classified as held for sale’) – ('Total current liabilities' – 'Short term debt and current maturities of long-term debt' – 'Liabilities classified as held for sale')
DIO (days inventory outstanding; quarter-to-date) =	('Net Inventories'/'Cost of goods sold') x 90
DPO (days payables outstanding; quarter-to-date) =	('Trade payables'/['Cost of goods sold' + 'Purchase of property, plant and equipment']) x 90
DSO (days sales outstanding; quarter-to-date) =	('Trade receivables’ - ‘reimbursement obligations’)[1]/'revenue' x 90

Order backlog =	The total amount of orders received regardless of their current status

ESG footnotes:

1) This figure takes into account manufacturing, transportation, own vehicles, travel, raw materials and consumables, chemicals, water/waste water, direct emissions, energy consumption, waste, etc. as well as direct and indirect energy-related emissions by manufacturing service providers. It is based on data collected internally and publicly available conversion factors and relates to the 2021 fiscal year.
2) This figure is based on internally established criteria, which are described in the explanatory notes. The figure relates to the 2020 calendar year and takes into account the following application areas: automotive, LED, induction cookers, servers, renewable energy (wind, photovoltaic) and cell phone chargers as well as drives. CO_2 savings are calculated based on the potential savings generated by technologies in which semiconductors are used. The CO_2 savings are allocated based on Infineon's market share, semiconductor share, and the lifetime of the technologies concerned, based on internal and external experts' estimations. Despite the fact that carbon footprint calculations are subject to imprecision due to the complex issues involved, the results are nevertheless clear.
3) Carbon neutrality is defined in terms of Scope 1 and Scope 2 emissions.

[1] Without debtors with credit balances

Financial calendar

Date	Event	Location
15 May 2024	JP Morgan European TMT Conference	London
16 May 2024	UBS Best of Europe Conference	virtual
22 May 2024	JP Morgan Annual Global Technology, Media and Communications Conference and JP Morgan EMEA All Stars Forum	Boston
22 May 2024	dB Access European Champions Conference	Frankfurt
29 May 2024	Goldman Sachs Semiconductor Conference	New York
30 May 2024	Cowen TMT Conference	New York
5 – 6 Jun 2024	BofA Global Technology Conference	San Francisco
5 – 6 Jun 2024	Exane BNP Paribas CEO Conference	Paris
6 Jun 2024	Erste Bank Future in CEE – ERSTE Consumer & Technology Conference	virtual
11 Jun 2024	BofA C-Suite TMT Conference	London
5 Aug 2024[1]	Earnings Release for the Third Quarter of the 2024 Fiscal Year	
12 Nov 2024[1]	Earnings Release for the Fourth Quarter of the 2024 Fiscal Year	

[1] Preliminary

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